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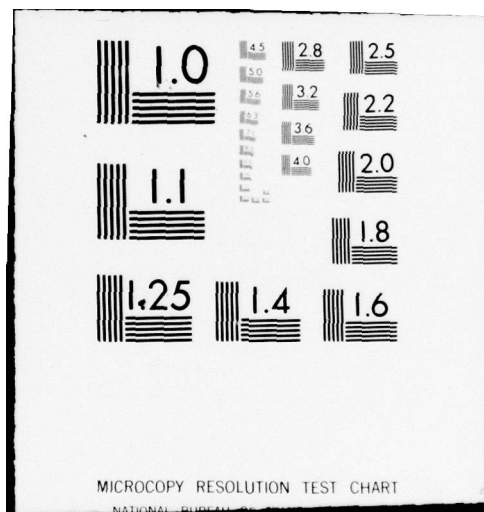NATIONAL BUREAU OF STANDARDS

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6 RESEARCH ON

SOCIALPSYCHOLOGICAL

FACTORS UNDERLYING THE

IDEA OF DISCIPLINE.

VOLUME I.

CONCEPTUAL AND PREDICTIVE

MODELS OF

ARMY UNIT DISCIPLINE.

15 DAHC19-73-C-0036

10 Ronald G. Bauer, Ph.D.

Robert L. Stout, Ph.D.

11 May 1974

12 193

The Bendix Corporation
Aerospace Systems Division
Applied Science & Technology Dept.
3300 Plymouth Road
Ann Arbor, Michigan 48107

9 Final rept 14 May 73 — 13 May 74,

For: USARI

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Research on Socialpsychological Factors Underlying the Idea of Discipline

Volume I Conceptual and Predictive Models of Army Unit Discipline

Ronald G. Bauer, PhD
and
Robert L. Stout, PhD

May 1974

Bendix **Aerospace Systems Division**

Bendix Aerospace Systems Division
Applied Science and Technology Department
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RESEARCH ON SOCIALPSYCHOLOGICAL FACTORS UNDERLYING THE IDEA OF DISCIPLINE

VOLUME I

Conceptual and Predictive Models of Army Unit Discipline

Ronald G. Bauer, PhD
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Robert L. Stout, PhD

Volume One of Two Volume Final Report Submitted to:

U.S. Army Research Institute for the
Behavioral and Social Sciences
1300 Wilson Boulevard
Arlington, Virginia 22209

in accordance with
Contract DAHC19-73-C-0036 *new*
Modification P00001

May 1974

RESEARCH ON SOCIALPSYCHOLOGICAL FACTORS
UNDERLYING THE IDEA OF DISCIPLINE

BRIEF

Problem. --The primary objectives of this research were to (1) develop and test conceptual and predictive models of Army discipline and (2) develop demonstrably reliable measures of unit discipline and its predictors that may be used to help Army leaders empirically assess and manage discipline in their commands.

Method and Procedures. --The approach taken in this inquiry was to develop conceptual and predictive models of discipline based on the perceptions of active-duty Army personnel and a review of related research. Army personnel perceptions were obtained through in-depth interviews with a wide-range sample of active-duty officers and enlisted men in commands located in the United States and Europe. To obtain data to test the conceptual and predictive models of discipline, a questionnaire was administered to a sample of more than 1500 non-commissioned officers and enlisted men at installations in the United States and Europe. The measures of discipline and its predictors were developed using Guttman-Lingoes non-metric scaling techniques, including smallest space analysis (non-metric factor analysis). Predictive models of Army unit discipline were tested using multiple regression.

Results. --Nonmetric factor analysis indicates that there are three distinguishable components of military unit discipline; unit performance, appearance, and conduct; and three scales are developed to measure these aspects of discipline. Factor analysis and other techniques also led to two scales for measuring different aspects of leadership, as well as scales to measure esprit d'corps, attitudes toward military work role, racial discrimination, both within the unit and in general, and an index to measure the availability of recreational facilities. The three discipline scales, the two leadership scales, and the esprit d'corps scale are shown to be valid, with the possible exception of the second leadership scale, by comparison of scores from respondents in non-elite and elite units. Other scales and indices were also developed in connection with subsidiary analyses.

Multiple linear regression analyses show that unit performance can be strongly predicted by scales measuring esprit d'corps, leadership, satisfaction with military work role, quality of living quarters, and availability of recreation. The factors which are associated with good unit performance vary among different types of units. For combat units, esprit d'corps, leadership, and satisfaction with work role are the best predictors, in that order. For support units, esprit d'corps is also the best predictor, although not as strong as for combat units, followed by satisfaction with military work role, leadership, availability of recreational facilities, and satisfaction with living quarters. For training units, leadership is the strongest predictor, followed by quality of living quarters and esprit d'corps.

Unit appearance is considerably less predictable than unit performance for combat and support units. However, esprit d'corps and leadership are its best predictors. There does not appear to be a distinguishable unit appearance dimension for training units.

Unit conduct, a measure of how willingly unit members obey their leaders, is best predicted by esprit d'corps, the degree of racial discrimination in the unit, satisfaction with military work role, and, to a small extent, by general racial discrimination and leadership in the soldiers' environment. Unit conduct is less predictable than unit performance and more predictable than unit appearance.

Discussion and Conclusions. --These findings are discussed in terms of their implications for public policy and future research needs. The results of the inquiry have important policy implications, for they demonstrate that Army unit discipline can be reliably measured and, to a great extent, predicted by measures of environmental pheonomena. It is important to note that these environmental circumstances are subject to development and change by the application of Army management programs and practices. Some of the specific steps that may be taken to improve Army unit discipline through environmental change are discussed.

It is deemed imperative that further research be undertaken to test, in the field, the conceptual and predictive models of discipline developed through this inquiry. It is important to know to what extent these models may vary when applied to commissioned officer populations, as well as

to different types of military units. The models should be validated by comparing the attitudinal data from which they were developed with actual observed behavior. And the acquired measures of discipline and its predictors should be applied to units in the field to test the feasibility of employing these instruments as management tools to diagnose and improve Army discipline.

v

ACKNOWLEDGEMENTS

TABLE OF CONTENTS

LIST OF TABLES

LIST OF TABLES (CONT.)

LIST OF TABLES (CONT.)

x

LIST OF ILLUSTRATIONS

INTRODUCTION

THE PROBLEM

During the mid-1960's, as the Army became increasingly involved in Indochina, military delinquency began to rise to unprecedented levels. By 1971, Army commanders worldwide could expect one out of every four soldiers to go AWOL or desert (Congressional Quarterly Weekly Report, 1972, p. 392). Desertion rates were the highest recorded since the Pentagon began keeping these statistics during World War II. The rates were, at this point, over three times greater than the highest levels reached during the Korean War and nearly double those of the peak years of World War II. There were similar increases in the rates of courts-martial, non-judicial punishments, and less-than-honorable discharges. Whereas 47 soldiers per thousand received non-judicial punishment in the first quarter of 1965, 62 per thousand received such punishment during the same quarter in 1972. Over the same period, less-than-honorable discharge rates rose from 2.7 to 11.1 per thousand. [1]

The state of Army discipline was not only reflected in official statistics based on absenteeism and judicial decisions. Confirmed fragging incidents rose from a rate of eight per month in 1969 to 19 a month by late 1971 (Congressional Quarterly, 1973, p. 393). In addition to fragging incidents, the Army continued to be plagued by group refusals to obey orders, demonstrations by its members, racial conflicts, illicit drug usage, alcoholism, and other patterns of military delinquency.

By 1974, Defense Department statistics indicated delinquency problems in the Army might be lessening. [1] But they also indicated that court-martial, non-judicial punishment, AWOL, and desertion rates were still at exceptionally high levels. And racial conflict, illicit drug usage, alcoholism, and absenteeism continued to threaten Army control over its personnel and, hence, its ability to perform its mission.

This malaise led Army leaders to seek to develop new policies and programs to improve discipline. However, these new steps generated a wide range of both positive and negative reactions among those who had to implement them. And it soon became apparent that there was a need to develop a means by which the state of Army discipline could be empirically assessed and managed.

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[1] Unclassified data provided by Office of the Deputy Chief of Staff (Personnel), Department of the Army, Pentagon.

Leaders involved in managing the Army's human resources recognized that before the problem of Army discipline could be accurately assessed and dealt with, there must first be agreement on what military discipline is. Without a common conceptualization, views on the state of discipline and its determinants would continue to be plagued by individual biases, and leaders would not know what is being measured. There was also a realization that there was little common agreement on what the determinants (or predictors) of discipline or indiscipline are. Thus, there was conflict among Army leaders as to what steps should be taken to maximize discipline levels in today's Army.

This research project was born out of this milieu, and is a result of the Army's recognition of these problems. From the beginning, it has had three major objectives. The first was to develop a conceptual definition of discipline as that idea is understood in today's Army. The second was to identify those phenomena that social scientists and active duty Army personnel perceive to be the principal social psychological indicators and determinants of discipline in today's Army. After the accomplishment of these two objectives, the third objective was to conduct empirical research to develop demonstrably reliable measures of discipline and its predictors that can be used in a survey feedback system to assess and maximize Army discipline.

These objectives have been accomplished. The purpose of this report is to describe the previous research, theory, methods, procedures, and empirical results used pursuant to these objectives and to discuss the results in terms of their implications for public policy and future research needs.

REVIEW OF PREVIOUS RESEARCH

Previous research on topics related to military discipline have generally focused on the military deviant and his individual characteristics. Because AWOL (absence without leave for less than thirty days) is the predominant form of military delinquency, most research efforts have been directed toward identifying the predictors of absenteeism in the Armed Forces. A review of the resulting literature reveals a great deal of duplication, both within and between the armed services. This is apparently the product of a general lack of communication between various agencies sponsoring research on military delinquency, as well as a lack of continuity in institutions and personnel engaged in this area of social inquiry. The lack of continuity and communications between institutions and personnel is partially the result of the cyclical nature of inquiries on military

delinquency. As noted by McCubbin and others, (1971, p. 6). "Research on the military offender has occurred in cycles, with the greatest emphasis appearing in times of major conflicts." Between wars, research on the etiology of military delinquency is reduced considerably.

Despite the lack of continuity and duplication of effort in research on military delinquency, several trends are discernible. Empirical research on the causes of military deviancy essentially began during World War II. Researchers during the 1940's basically focused their attention on individual characteristics, such as levels of maturity, education, marital status, civilian arrests and convictions, path of recruitment into the military service, and psychopathic or psychoneurotic traits. The works of Stouffer and Otness (1946), Manson and Grayson (1946), LaGrone (1947), Feldman and Maleski (1948), Davis et al. (1945), Schneider et al. (1944), and Bromberg et al. (1945) are representative of most empirical research performed during the period.

Research on individual characteristics in relation to military delinquency continued through the early 1950's. From these studies, the military offender began to emerge as more than likely to have (1) less than a high school education, (2) a history of truancy and civilian arrests, (3) poor civilian job performance, (4) an unstable home environment while growing up, (5) entered the service voluntarily rather than have been drafted, and (6) a neurotic hatred of authority figures and the military service.

There was also, at this time, some interest in environmental factors affecting military delinquency. French (1951) found that a naval recruit's sociometric status within his training company is related negatively and significantly to his tendency to commit military offenses. Similarly, Christie et al. (1952) reported that the proximity of the Army recruit's home to his basic training camp was inversely related to his ability to adjust to Army life and perform well. Finan et al. (1958) reported that among Army enlisted personnel, men in a transient status between assignments or commands were more likely to go AWOL than soldiers integrated into regular units (Cf. Hauser, 1973, pp. 93-95). Not surprisingly, they also found that imminent assignment to combat duty also contributed to AWOL, and that soldiers with "family problems" were more likely to go AWOL than soldiers with no problems at home. Finan et al. also touched on a variable that had previously received little empirical investigation as a possible determinant of delinquency — perceptions of leadership. They found that a perceived lack of personal interest by unit leaders contributed to military delinquency. This study marked a beginning in efforts to assess empirically the impact of organizational variables, such as perceived leadership, on Army delinquency.

During the late 1950's and early 1960's, many researchers contin-
ued the tasks of measuring the relationships between military delinquency
and social background characteristics and/or psychiatric judgments, with
the ultimate hope of developing a predictor of individual military delinquency
that could be used as a device for screening potential deviants from the
Armed Forces. However, it was becoming more apparent that social back-
ground information alone would not suffice as a basis for predicting military
delinquency. As noted by Ryan, in the conclusion of his analysis of per-
formance of Fort Dix basic trainees, (1958, pp. 117-118),

> "...caution must be observed in judging the importance of
> certain social background data in relation to performance.
> Although there are statistically significant relationships
> between such factors as broken homes, poor school attend-
> ance, civil crime etc. [sic] and substandard performance,
> these relationships were generally subtle and by no means
> exclusive. Most subjects with pathological social background
> histories were satisfactory soldiers."

The futility of seeking to prevent the entrance of potential delinquents
into the military based solely on tests and psychiatric criteria was also
becoming apparent (Lang, 1965, p. 858; and Ginzburg et al. 1959). In a
1964 report on a four-year Navy effort to develop a predictor of military
performance based on psychiatric interview data, for example, Plag (1964)
reported that the Navy's psychiatric screening interview, as currently con-
ducted, had little predictive value. A year later, Plag and Arthur (1965)
confirmed Plag's previous findings based on their effort to predict unsuit-
ability among naval recruits. They concluded that the Navy psychiatric
screening system they tested had statistical validity but had limited prac-
tical value because over 70 percent of the recruits psychiatrically judged
to be unsuitable for naval service using the screening system subsequently
evidenced satisfactory adjustment to Navy life.

During the mid-1950's and 1960's, with increasing evidence that
social background variables alone would not provide adequate predictors
for screening potential military offenders from among recruits, researchers
began to place greater emphasis on personality characteristics to discrim-
inate between potential military offenders and non-offenders. This in-
creased emphasis on personality traits merged with a series of investiga-
tions that led to the development of several self-report personality inven-
tories containing scales capable of discriminating between delinquents and

non-delinquents in both civilian and military samples (Gough, 1954; Peterson, Quay, and Cameron, 1959; Gordon, 1960; Gordon, 1961; Quay and Peterson, 1964; Knapp, 1963; Knapp, 1964; Kristiansen and Larson, 1967).

Unfortunately, these personality measures did not provide an operational basis for screening potential delinquents from the armed services, even when combined with pertinent social background information (Gunderson, undated; Gunderson and Ballard, undated; Larson and Kristiansen, 1967). Exhibiting a considerable amount of "slippage", the measures tended to screen out an undue number of recruits who were subsequently found to be non-offenders and reasonably well adjusted to military life. Based on their effort to predict delinquency among Army recruits, using three scales derived from the University of Illinois Personal Opinion Study and one scale derived from previous Army research, Larson and Kristiansen (1969, p. iii) concluded:

> "Taken together with similar findings on the predictions of military offenses during two years of service, these findings should discourage efforts to predict individual disciplinary offenses on the basis of individual soldier characteristics on entry to military service."

In the late 1960's, several researchers involved in etiological inquiries on military delinquency directed their attention to examining the impact of various environmental stimuli on military delinquency. Reports from the Wakeoff Research Center revealed that social isolation did not have an apparent effect on military performance (Goldstein et al., 1968). On the other hand, Watson (1969) reported that the lack of after-duty recreation facilities, unit-oriented activities, unit-integrity, and proper duty assignments, all contributed to the number of AWOL offenses.

These studies and the continuing failure of other scholars to develop efficient and reliable predictors of military delinquency based on individual characteristics led some researchers to call for the inclusion of environmental variables into the list of predictors. McCubbin et al. (1971, p. 8), for example, stated:

> "The individual factors which were first thought to be significant in attempting to predict those individuals who may become military deviants, as far back as the recruiter level, have proved to be quite unsatisfactory."

Thus, they concluded that research designed to develop predictors of
AWOL offenses must take into account the situation and leadership climate
in which the soldier lives, as well as personality and background character-
istics. In their subsequent research on the relation between AWOL offenses
and individual and environmental characteristics, McCubbin et al. (ibid)
found that among 24 company-sized units in four major geographically di-
verse Army installations, "low-AWOL" units were generally characterized
by their members having more positive perceptions of and greater satisfac-
tion with their leadership, job situation, opportunities for promotion, and
the availability of recreational facilities. Low-AWOL units were also found
to be characterized by greater problem-solving activities by agencies such
as the Judge Advocate General, the Mental Hygiene Consultation Service,
and the Inspector General, as well as high unit morale, low personnel tur-
bulence due to transfer, less racial conflict, less illicit drug usage and
alcoholism, less encouragement of members by peers to go AWOL, and
less experience of members with punishments for previous military offen-
ses.

There are still occasional research reports indicating a continuing
effort by researchers to develop and test personality measures and to use
social background indicators as predictors of military effectiveness and
delinquency (Berbiglia, 1971; Fraas and Fox, 1972; Frass, 1972; Mahan
and Clum, 1971; Clum and Mahan, 1971; Drucker and Schwartz, 1973).
But the fact remains that the majority of "potential military offenders",
as designated by various personality and background characteristics, per-
form acceptably well and do not commit military offenses after they enter
the various armed services.

It should be noted that the search for personality and background pre-
dictors of military delinquency has provided valuable insights into the na-
ture of the military delinquent, particularly the AWOL offender. This type
of research has also demonstrated the necessary complexity of a causal
model of military delinquency, as well as the necessity of searching for
new predictors if we are to begin to understand and manage military delin-
quency. But it is time to begin to examine more closely the environmental
characteristics that may influence military behavior, for it is apparent
that personality and previous background experience explain little of the
variance in military behavior. Environmental phenomena may, in fact,
play a critical role in accounting for military delinquency.

Several recent studies indicate that taking an environmental approach to the etiology of military delinquency is likely to be fruitful. In a recent effort to account for variation in reenlistment rates aboard Navy ships, Drexler and Bowers (1973) found that the rate of reenlistment can be predicted by organizational variables such as perceptions of supervisory behavior, as well as satisfaction with supervisors, peers, opportunities for advancement, and assigned duties. In concluding their report, Drexler and Bowers (ibid., p. 13) note that, given the apparent utility of the organizational approach, future research should also investigate the relationships between organizational characteristics and other criteria, including the quality of unit performance, conflicts, and disciplinary actions. James and Hornick (1973), based on their ongoing analysis of the relationships between various criteria and situational, organizational, and individual characteristics of Navy commands, report that a favorable organizational climate, as indicated by positive perceptions of leadership, job, work group, and organizational characteristics, is positively and significantly related to intent to reenlist, satisfaction with the Navy, promotion rates, and other related criteria. Holz and Gitter (1974) reported that a post's physical isolation or its proximity to an urban area have a significant impact on its members' perceptions of quality of life in the Army, and that levels of satisfaction with opportunities for advancement, hair-cut regulations, daily work, and degree of equal treatment for soldiers of differing racial ancestry all served as significant predictors of intent to pursue an Army career. Thus, it is more than apparent that there is a need for further research to identify the environmental predictors of military behavior since environmental and particularly organizational characteristics are subject to management and change. If measures of military unit discipline can be developed, merged with efficient survey feedback systems, and used to identify and minimize discipline problems, this new path of inquiry will be more than justified. It will take military leaders out of the realm of trying to limit military delinquency through selection processes and into the field of human resource management where tactical unit leaders can take positive actions to maximize discipline in their commands.

METHODS AND PROCEDURES

APPROACH

Researchers performing etiological inquiries concerning military discipline have generally used official judgments as evidenced by military arrests, convictions, less-than-honorable discharges, and institutionalization as their discipline criteria. This approach has several weaknesses. First, there are individual characteristics, such as rank, that may affect both the likelihood that the soldier will commit a crime and the probability that the individual will be charged, convicted, imprisoned and/or discharged for a crime. The problem is analogous to that confronting students of juvenile delinquency where socio-economic biases relate to police and punishment procedures, as well as the likelihood that an individual will commit a delinquent act.

A second inherent weakness in previous etiological research on military discipline in which offenders and non-offenders have been identified according to official administrative or punitive judgments has been the tendency for researchers to fail to account for the possible effects the institutionalization process may have on military prisoners or correctional trainees. The differences in sentiments found between offenders and non-offenders may be the product of the experiences the military offender encounters after he has been charged, convicted, sentenced, and incarcerated.

A third weakness in the use of official punitive judgments as criteria to distinguish between disciplined and indisciplined troops results from the restrictions this places on the conceptual definition of discipline that may be used in the inquiry. Many Army personnel commonly perceive discipline to be a behavioral construct incorporating both conforming and non-conforming patterns of behavior. In other words, they perceive there to be "positive" indicators of discipline, such as outstanding job performance as well as "negative" indicators, such as insubordination. In short, there is a need for a discipline criterion that is based on conforming, as well as non-conforming behavior.

A final weakness inherent in the use of official punitive actions as discipline criteria is that it permits the researcher to develop criteria that are based on evidence of only the more extreme patterns of delinquent

8

behavior. It does not permit the researcher to conduct causal inquiries
into the more common but less extreme forms of military delinquency such
as shirking of duties, failure to respond readily to direct orders, failure
to perform well without supervision and so on. These patterns of behavior
are important contributors to poor unit performance and, therefore, deserve
empirical analysis in their own right. But more important, these patterns
of less delinquent behavior are often the harbingers of greater discipline
problems. Criteria based on police and punitive actions fail to enable military
leaders to foresee trends in less deviant behavior that may be used to
predict - and thus allow leaders to prevent - the outbreak of serious indis-
cipline. And, as noted earlier, there is an important and recognized need
for a measure of military unit discipline that can be coupled with a survey
feedback system and used to identify potential discipline problem areas on
an ongoing basis in specific units and commands. Such a tool is essential
if military leaders are to begin to minimize the massive expenditures made
each year to support military investigatory, legal, judicial, confinement,
and correctional activities.

In summary, a central weakness of previous etiological research on
military delinquency has been the tendency for researchers to use discipline
criteria based on summaries of official punitive actions taken against military
delinquents. By taking this approach, researchers have not provided military
field commanders - who have the most potential for preventing military
delinquency - with the means to detect, diagnose, and treat discipline prob-
lems before they result in gross delinquent behavior and necessitate taking
official punitive actions.

A central feature of the approach taken in this inquiry, therefore, has
been to develop measures of military discipline that are not based on official
punitive actions, but rather on the perceptions of the men in the units who
are most aware of discipline problems and sensitive to their causes. The
intent is to develop discipline criteria that are not only conceptually in com-
pliance with the Army's understanding of the discipline concept, but also
useful as a basis for developing a discipline measure that may be used as
a management tool to enable field commanders to detect, diagnose, and
treat discipline problems in their commands. The emphasis here is on
providing preventive rather than punitive means of controlling Army discipline.

inductivly
define discipline

A second major feature of the approach taken in this inquiry is that it is basically inductive. The researchers sought to develop an etiological model of Army discipline that was not based solely on their own preconceptions or those of other researchers in the field. Instead, the intent was to develop a conceptualization of military discipline and a model of its principal socio-psychological indicators and determinants that utilizes the expertise of active-duty Army personnel. To this end, a major portion of the research effort described in this report was an in-depth interview survey of Army personnel to gain the necessary insights into Army perceptions of discipline and its determinants.

A third major feature of the approach taken in this inquiry has been to seek to develop measures of discipline and its predictors based on subjective rather than non-subjective data. Rather than try to obtain objective measures of discipline and its determinants, the researchers sought to develop measures of subjective perceptions of these phenomena. This approach was taken in order that the measures might eventually be coupled with survey feedback systems and used as organizational development tools by Army managers.

Another central feature of the approach taken in this inquiry is that the researchers did not assume the principal socialpsychological phenomena they sought to conceptualize and measure were unidimensional. The majority of researchers developing conceptual definitions and measures of political and socialpsychological constructs have tended to persist in assuming the structure of the phenomena they attempt to define and measure are unidimensional. Some scholars, however, have shown that many psychological constructs previously assumed to be unidimensional are, in fact, multidimensional. Brown and Taylor (1972), for example, in an analysis of concept formation in the social sciences, provided evidence that conservatism, as a psychological construct, may best be described as having several dimensions rather than one as originally prescribed by McClosky (1958). Therefore, when the design for the present research was developed, it was viewed as possible, and indeed likely, that military discipline would be a multidimensional construct and the scale construction design and procedures used in this inquiry were developed accordingly.

A final central feature of the approach taken in this inquiry was the researchers' desire to delineate environmental, as well as individual phenomenon that may have impact on Army discipline. In order to develop a complete model of military discipline and its determinants, individual phenomena, such as basic personality characteristics and social background

experiences, were included in the analysis, but environmental features such as leadership behavior and quality of life features were also taken into account. This aspect of the approach taken in this project was basic-ally a product of the researchers' review of related literature reported earlier which revealed that individual characteristics do not explain a sufficient amount of variance in military delinquency to be useful in efforts to explain and predict Army discipline.

DATA COLLECTION

A Review of Official Regulations and Policy Statements. — To develop a conceptualization of military discipline, the researchers first reviewed official regulations and policy statements describing military discipline as the concept is used in the various branches of the U.S. Armed Forces. The purpose of this review was to identify the various ways the term discipline is used in the American military, and thus provide a perspective for con-ceptualizing the term as it is used in today's Army.

The results of this review indicated that there is little consensus either within or between the various Armed Forces on the meaning of the term dis-cipline. Various official and semi-official sources define military discipline as being either a pattern of behavior that reflects conformity to prescribed military norms, attitudes that predispose soldiers to conform to these prescribed norms, or training or punishment that causes soldiers to con-form to prescribed norms.

An example of the behavioral definition is found in the Army Officer's Guide which describes military discipline as "...an intelligent, willing, and cheerful achievement of assigned mission or compliance with orders" (Crocker, 1971, p. 281). Similarly, an official Soldier's Guide suggests that discipline is the "...state of order and obedience among military personnel resulting from training" (U.S. Department of the Army, 1961, p. 134).

A typical attitudinal definition is offered in a Department of the Army Field Manual which defines discipline as an "...individual or group attitude that insures prompt obedience to orders and initiation of appropriate action in the absence of orders [and] ... a state of mind that produces a readiness for willing and intelligent obedience and appropriate conduct" (U.S. Department of the Army, 1965, p. 27). More recently, the Department of the Army Legal Guide for Commanders used a definition quoted from a Congressional report

which describes military discipline as being "...a state of mind which leads to a willingness to obey an order no matter how unpleasant the task to be performed..." (U.S. Department of the Army, 1972, p. 1-1). Comparable definitions of military discipline as an attitudinal phenomenon are also found in Air Force and Navy reference materials. (Heflin, 1956, p. 169 and Noel, 1959, p. 127-128).

The use of the term discipline to describe either training or coercive actions taken to cause soldiers to conform to prescribed norms is far less common in official publications and policy statements. However, it is occasionally found in literature describing policies and practices in military confinement facilities (McMahon, 1962, p. 45; MacCormick, 1945, p. 7).

In summary, there is no apparent consensus among military writers and policy-makers concerning the use of the term discipline. In light of this finding, it became apparent that to develop a conceptualization of military discipline as the concept is understood in today's Army, it would be necessary to turn to field interviews as a second source of guidance.

Field Interviews. — As noted above, to assure the development of a conceptualization and etiological model of discipline as that complex phenomenon is understood by the Army, the researchers conducted a series of in-depth interviews of active-duty Army personnel to determine what officers and enlisted men in today's Army perceive discipline and its determinants to be. This interview program began with a series of unstructured discussions with Army officers and civilian personnel in the U.S. Department of the Army, the U.S. Army Research Institute for the Behavioral and Social Sciences, and the U.S. Army War College. From the information gathered during these discussions, it was possible to define an interview sample and develop an unstructured in-depth interview format for pretesting.

The objectives of the interviews were to determine: (1) how the interviewees defined discipline, (2) what they perceived its principal indicators to be, and (3) what they perceived its major determinants to be. The interview results were intended to guide the researchers in their efforts to develop a self-report survey instrument that would provide data to develop and test conceptual and predictive models of Army discipline.

Given the inevitable exigencies of time and resources, it was not possible to develop a service-wide sample for the interviews. It was deemed

imperative, however, that the interviews reveal as much as possible the broad scope of Army experience and perspectives related to the concept of discipline. For this reason, the interviews were performed using a sample which was deemed representative of the Army in terms of several individual and environmental characteristics. The interviewees were selected from sites that were representative of the Army in terms of several environmental criteria, including region, proximity to urban areas, types of units assigned to the post, levels and types of training exhibited by post personnel, quality of on-post services and facilities, levels of military delinquency, presence of soldiers' dependents, reputed levels of on-post and off-post racial polarization and discrimination, the presence of military personnel confinement or correctional training facilities, and physical climate.

For each site, interviewees were selected according to individual criteria that would maximize the likelihood that the respondent would have the knowledge, experience, and ability to provide direct insights into the nature of Army discipline. The individual characteristics used as selection criteria were rank, position within the chain of command, type of unit assigned, functional (or occupational) specialty, racial ancestry, and experience with or involvement in military personnel problems and delinquency. The sample was purposely weighted so as to tap the perspectives of persons within the Army organizational and social structures who have the most contact--as leaders, counselors, or peers--with discipline problems in their units. The content of the sample is described in Tables 1 and 2.

The central feature of the interviewing process was that information flowed from the respondent to the interviewer in an unstructured open-ended question format. The interviewer's role was primarily to probe the respondent for elaboration and clarification of ideas introduced by the respondent. Leading questions were kept to a minimum to avoid response bias.

The interview format was relatively simple. The rank and MOS of the respondent were noted along with the location, date, and any significant unusual event that occurred during the interview. Each interview was initiated with a very brief introduction to the goals of the inquiry and the institutions performing and sponsoring the research. The respondent was assured of his anonymity and the confidentiality of his responses. He was

Table 1

INTERVIEW SAMPLE CHARACTERISTICS: COMMANDS, INSTALLATIONS AND TYPES OF UNITS*

CONUS Commands

Fort Devens, Massachusetts: Garrison, Combat (Special Forces), Support (Engineering, Transportation, Supply and Services), Training (NCO Academy) and Correctional (Personnel Confinement Facility).

Fort Bragg, North Carolina: Garrison, Combat (Airborne Infantry, Armor, and Artillery), Support (Supply and Service, Medical), Training (NCO Academy), and Correctional (Personnel Confinement Facility).

Fort Riley, Kansas: Garrison, Combat (Infantry, Armor, Artillery), Training (NCO Academy), Correctional (Post Confinement Facility and U.S. Army Correctional Training Facility).

Fort Ord, California: Garrison, Training (NCO Academy, BCT and AIT), Correctional (Post Confinement Facility Personnel).

USARAL Commands

Fort Richardson, Alaska: Garrison, Combat (Infantry), Correctional (Personnel Confinement Facility).

Fort Wainwright, Alaska: Garrison, Combat (Infantry, Air Defense), Support (Aircraft Maintenance, Engineering, Military Police) and Correctional (Personnel Confinement Facility).

USAREUR Commands

Goeppingen, West Germany: Headquarters, Combat (Infantry).

Boeblingen, West Germany: Combat (Infantry, Armored Cavalry).

Frankfurt, West Germany: Headquarters, Combat (Armored Cavalry).

Bad Kreuznach, West Germany: Headquarters, Combat (Infantry).

Bad Toelz, West Germany: Headquarters, Combat (Special Forces), Training (NCO Academy).

Berlin: Headquarters, Combat (Infantry), Support.

Mannheim, West Germany: Correctional (Personnel Control Facility).

Heidelberg, West Germany: Headquarters, U.S. Army, Europe.

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*Sites in South Korea and South Vietnam were not available because of conflicting field research schedules and ongoing troop withdrawals respectively. Other non-CONUS sites were not selected because of limited numbers of Army personnel assigned and research cost-benefit considerations.

Table 2

INTERVIEW SAMPLE CHARACTERISTICS: INDIVIDUAL
RESPONDENT CHARACTERISTICS BY TYPE AND RANK

By Type	Number	By Rank	Number
Chiefs of Staff/Headquarters Personnel	14	General	–
Brigade Commanders	9	Colonel	11
Battalion Commanders	15	Lieutenant Colonel	21
Company Commanders	27	Major	31
Platoon Leaders/Executive Officer (Company Level)	12	Captain	58
		First Lieutenant	24
Platoon Sergeants	12	Second Lieutenant	7
Squad Leaders	14	E9/Sergeant Major	6
Provost Marshal's Office Personnel (Officers and Men)	20	E8/Master Sergeant	14
Chaplains	18	E7/Sergeant First Class	25
JAG Officers (Trial and Defense Counsels)	17	E6/Staff Sergeant	19
		E5/Sergeant	20
Inspectors General	10	E4/Corporal/Specialist	17
Equal Opportunity/Human Relations Office Personnel	15	E3/Private First Class	15
		E2/Private	5
Alcohol and Drug Control Office Personnel (Staff and Counselors)	16	E1/Recruit	10
		Civilian	5
Stockade/Retraining Brigade Staff and Cadre	14	Unidentified	3
Social Workers/Psychiatrists	12	Total Interview Sample	291
NCO Academy Commandants and Cadre	10		
Drill Sergeants	12		
Enlisted Personnel/Support Units	26		
Enlisted Personnel/Combat Units	10		
Inmates/Trainees	8		
Total Interview Sample	291		

further assured that the interviewer intended to elicit his opinions and observations rather than to ask questions for which there were right or wrong answers. The respondent was asked if he or she had any questions. If not, the interview began. The first item asked for a definitional response to the question "When you hear the word 'discipline' what do you think of, what does the word mean to you?" The respondent was then asked to cite what he would look for if he were assigned the task of assessing the level of discipline in a particular unit. Finally, the interviewee was asked to identify the things he or she thought had an important impact on Army discipline. The length of interview sessions ranged from forty-five minutes to an hour and a half, depending on the productivity of the session and the interviewee's schedule.

During the actual field administration of the interview, if the discussion lagged, the interviewer would attempt to stimulate the respondent to think further about the topic by asking broad questions about various phenomenon that might impact on Army discipline. It was recognized, however, that this interview procedure diverged from the inductive approach taken in this inquiry and might provide a source of response bias. Consequently, a rating technique was developed and tested which provided the respondent the opportunity to go back over the list of determinants of discipline he had mentioned and ascribe to each a weighting of from 1 to 10, according to the perceived importance of the item as a determinant of Army discipline. The higher the weighting given, the more impact the item was perceived as having on Army discipline.

This weighting technique helped eliminate any bias that may have been introduced by the interviewer's probe questions by helping the interview scorer distinquish between items which were mentioned simply because they come readily to mind or were suggested by the interviewer's comments, and those items which were truly perceived by the respondent as having a substantial impact on Army discipline. The technique also provided the interviewee the opportunity to clarify his statements or to correct what he thought might have been the interviewer's misrepresentation or misunderstanding of the point he had wished to make.

Results. — The interview data revealed that an overwhelming majority of the respondents view discipline to be a behavioral phenomenon. It was generally described to be some form of ready and willing response to orders and/or compliance with military standards of performance, conduct and appearance with little or no supervision. Some of the more common words or phrases used to describe indicators of Army discipline were "the unit performing as a team," "cooperation in the unit to get the job done," "obedience," "neatness," "posture," "following the rules," "maintaining a high state of readiness," "good performance in absence of direct orders," "doing what has to be done without being told," "behaving according to standards," "observing military courtesies," "keeps equipment in good condition," and "orderly behavior" off-post. The term indiscipline was also commonly used to describe the absence of discipline in an individual or unit. Indicators of indiscipline were generally described in terms of failure to meet specific standards of conduct, such as keeping one's hair cut according to regulations, the commission of specific military offenses such as AWOL, stealing from others, "getting over" on superiors,[1] or simply court-martial and non-judicial punishment rates, AWOL and desertion rates, or levels of drug usage.

A few respondents defined discipline as being an attitudinal phenomenon or "state of mind" that causes a soldier "to obey lawful commands" or "to do what he doesn't want to do." Related descriptions include "an intangible that causes a man to do the right thing," "self control," "the ability to cope with what can't be changed" or "willingness to postpone immediate gratification" for anticipated gains later on. But attitudinal definitions were far fewer than the behavioral definitions described earlier.

Still fewer respondents perceived discipline to be coercive or punitive actions taken to cause soldiers to conform to military standards. Respondents who did take this approach in conceptualizing discipline were generally officers and enlisted men assigned to the Provost Marshall's Offices, the Judge Advocate General's Offices, or confinement facilities. Some representative words and phrases used to define discipline by such persons were "punishment," "power to control,"

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[1] "Getting over" is a slang phrase generally used to describe clever and subtle acts or interactions with supervisors resulting in the avoidance of work or punishment and/or the receipt of unmerited rewards.

"power to compel others to get the job done," "coercion," "Article 15's" [non-judicial punishment], and "courts martial" [judicial punishment].

In direct contrast to definitions found in the literature review, there were no respondents who described discipline as being training designed to predispose soldiers to behave in a prescribed manner.

In summary, the interview data revealed an overwhelming majority of the respondents viewed discipline as being individual or group behavior characterized by compliance with prescribed military standards and norms. Given this evidence and lack of any common conceptualization of discipline in official documentation and policy statements, the researchers chose to define Army discipline as being individual or group compliance with behavioral standards and norms prescribed by Army leaders.

Content analysis of the interview data revealed five basic categories of determinants of Army discipline. These categories are listed as being individual characteristics, such as personality and social background, and environmental characteristics, such as the military work role to which the respondent is assigned. As indicated in Figure 1 below, environmental phenomena far exceed individual phenomena in terms of the frequency with which they were mentioned and perceived as having a maximum relative impact on Army discipline.

Within the environmental category, leadership characteristics were by far the most important group, followed by military work role and other situational phenomena. The leadership characteristics are rank-listed in Table 3 according to the number of respondents who viewed these phenomena as having a maximum relative impact (ascribed weighting: 10) in Army discipline. Military work role and other environmental characteristics are similarly described in Tables 4 and 5.

Within the individual characteristics category, personality features such as acceptance of authority and sense of social responsibility were predominant over social background characteristics, such as family relations and pre-service delinquency. (Tables 6 and 7).
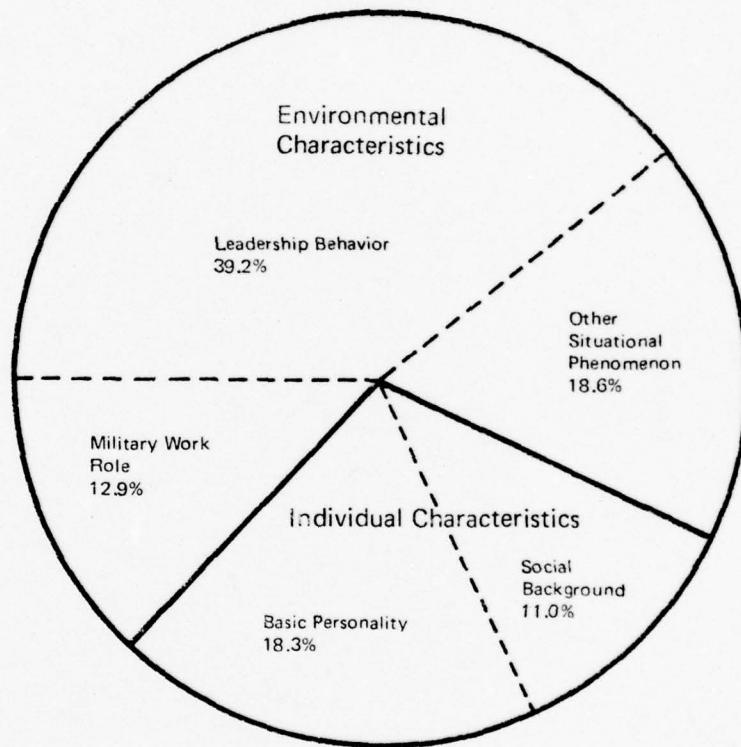
Figure 1   Categories of Determinants of Army Discipline

Table 3

PRINCIPAL DETERMINANTS OF ARMY DISCIPLINE
RELATED TO LEADERSHIP CHARACTERISTICS
ACCORDING TO ARMY INTERVIEWEES

Leadership Characteristic	Ss Citing Characteristic as Being an Important Determinant of Discipline	
	%	N
● uses chain of command	18.9	55
● displays communications and counseling skills	17.9	52
● displays concern for sub-ordinates/solves sub-ordinates personal problems	15.5	45
● is consistent in application of standards	14.1	41
● does not display excessive dependence on authoritarian practices and sanctions to control subordinates	14.1	41
● sets a good example	14.1	41
● knows and treats sub-ordinates as individuals	11.7	34
● displays technical competence	10.0	29
● has sufficient Army experience	9.6	28
● displays respect for his subordinates	8.6	25
● tends to be aloof	5.5	16
● tolerates criticism and is willing to learn	5.5	16
● is accessible to subordinates	5.5	16
● assures fair treatment of his subordinates	5.1	15

Table 4

PRINCIPAL DETERMINANTS OF ARMY DISCIPLINE
RELATED TO MILITARY WORK ROLE, ACCORDING
TO ARMY INTERVIEWEES

Military Work Role Characteristic	Ss Citing Characteristic as Important Determinant of Army Discipline %	N
• sense of accomplishment from completing assigned tasks	10.3	30
• belief that work is important, constructive, meaningful	9.6	28
• sense of boredom in military work role	6.8	20
• tedious, repetitious, and unchallenging training tasks	5.5	16

Table 5

PRINCIPAL DETERMINANTS OF ARMY DISCIPLINE
RELATED TO ENVIRONMENTAL PHENOMENA OTHER THAN
LEADERSHIP AND MILITARY WORK ROLE
ACCORDING TO ARMY INTERVIEWEES

Environmental Characteristic	%	N
Esprit d'Corps in Unit	10.3	30
General permissivienss in American Society	5.1	15

Table 6

PRINCIPAL DETERMINANTS OF ARMY DISCIPLINE RELATED
TO SOCIAL BACKGROUND ACCORDING TO ARMY INTERVIEWEES

Social Background Characteristic	Ss Citing Characteristic As Being An Important Determinant of Army Discipline	
	%	N
• family relations (parental concern, control. example, assignment of family responsibilities to children)	17.9	52
• age (maturity)	7.6	22
• educational achievement	6.5	19
• preservice delinquent behavior (including illicit use of drugs)	6.2	18
• parental marital status (broken home/absence)	5.5	16

Table 7

PRINCIPAL DETERMINANTS OF ARMY DISCIPLINE
RELATED TO BASIC PERSONALITY CHARACTERISTICS
ACCORDING TO ARMY INTERVIEWEES

Personality Characteristics	Ss Citing Characteristic as being an Important Determinant of Army Discipline	
	%	N
• sense of social responsibility and related desires to perform assigned Army tasks well	17.8	52
• acceptance of authority	14.8	43
• desire to conform to social/ military norms	11.3	33
• sense of apathy	10.3	30
• sense of self-esteem and self-competence	7.2	21
• status concern, desire to excel and achieve in life	6.5	19

Developing a Pretest Questionnaire. — On the basis of the analysis of the interview data and previous consultation with other researchers who have sought to obtain survey data on similar sociopsychological variables, [1] a self-administered questionnaire was designed to gather perceptions related to the variables described by the interviewees as being the indicators and leading determinants of Army discipline.

The questionnaire was pretested on a group of 151 soldiers in August 1973. The pretest sample was drawn from combat (Special Forces), support (supply and services, medical), engineering, and training (ASA school) units located at Fort Devens, Massachusetts. The pretest was administered by the same persons who would administer the final instrument.

The respondent ranks ranged from E-1 to E-9 with the median and modal ranks both being E-4. There were approximately 20 percent non-white and 80 percent white respondents in the sample. There were two women respondents. The mean time required for completing the questionnaire was 49 minutes, the median time 47 minutes, and the modal time 45 minutes. Of the 151 questionnaires administered, 141 were completed.

Following the administration, individual respondents were randomally selected and interviewed to determine if they found any apparent ambiguities or had any difficulty in understanding the questionnaire items. Those items that were cited were either reworded or eliminated from the final instrument. Comments by the interviewees and other respondents volunteering their reactions to the questionnaire also were used to develop additional response choices so as to provide as many reasonable and common answers as possible to the closed-response choice items.

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[1] During the course of this research project, various institutions were visited in which related research projects have been performed. The information obtained from researchers at these institutions was invaluable in guiding this effort and is very much appreciated. The institutions visited include the Leadership Study Group of the Strategic Studies Institute, U.S. Army War College, Carlisle Barracks, Pennsylvania; the U.S. Navy Medical Neuro-psychiatric Research Unit, San Diego, California; the Research and Evaluation Division of the U.S. Army Correctional Training Facility, Fort Riley, Kansas; the Organizational Development Directorate, Fort Ord, California; and the Institute for Social Research at The University of Michigan.

The Final Questionnaire. — The final version of the questionnaire was essentially the same as the pretest instrument, with the exception of the few item deletions or changes in item wording. The average administration time remained approximately 45 minutes during the subsequent field administrations of the instrument. It was encouraging to find that the great majority of respondents were willing and able to complete the questionnaire, and in fact, many reported that given the questionnaire's content and its apparent relevance to their daily lives and problems, they found completing the questionnaire an interesting and enjoyable experience.

Design of the Subsequent Research. — In view of the findings derived from the interview data, as well as from a review of relevant literature, conceptual and predictive models of Army unit discipline were developed for testing using the questionnaire survey data. A predictive model of unit discipline was specifically chosen because, as noted earlier, a central objective in this inquiry was to develop a survey instrument that could be used as a diagnostic management tool to help Army leaders assess and improve unit discipline.

The criterion variables included in the predictive models of unit discipline were unit performance, appearance, and conduct. The principal predictor variables in the models were perceptions related to leadership behavior, military work role, and esprit d'corps.

Several other possible predictor variables were included despite their poor showing as perceived discipline determinants by the interviewees. These variables include perceived racial discrimination, marital and financial problems, quality of living quarters, availability of recreational facilities, and so on. The researchers reasons for including these variables in the research design are described as these variables are discussed in the Results section below.

Predictive models of individual military delinquency were developed and tested as a secondary effort in the course of this inquiry. The results are reported in Appendix C. The models were tested in the interest of providing Army leaders and researchers with a partial replication of previous research directed toward predicting military delinquency. It is important to note here that it is apparent, in light of the findings derived from the interviews of active-duty Army personnel described earlier, that

military discipline and military delinquency are not equivalent concepts. Discipline, as that idea is understood by the active-duty Army personnel interviewed, is a series of acts which both contribute to and detract from the Army's efforts to accomplish its mission. Military delinquency in the form of absenteeism (AWOL, desertion), insubordination, illicit drug usage, and so on, is not perceived to constitute the principal or even the majority of socialpsychological phenomena underlying the idea of discipline.

The dependent variables included in the predictive model of military delinquency were AWOL, insubordination, and general delinquency. These variables were based on the number of times the respondent professed to have been charged with various military offences. (See Item 12 of section 8 (VIII-8) of the questionnaire, Appendix B.) The principal independent variables were individual social background and personality characteristics.[1] The major social background predictors were family relations, pre-service delinquency, educational achievement, and parental statuses while the respondent was growing up. The major personality predictors were sense of social responsibility, acceptance of authority, and status concern.

Sample. — The questionnaire was administered to a sample of enlisted personnel during the period of October 1973 to January 1974. The survey sites and units surveyed were, with a few exceptions, the same as those used in the interview phase of the inquiry (see Table 1).[1] As much as possible, the respondents were selected on a random basis with certain categories of respondents within each unit selected for inclusion in the survey. This was done to insure sufficient numbers of respondents in various rank, racial, and delinquent versus non-delinquent categories to facilitate and ensure the validity of subsequent statistical analysis of the data using these categories. The sample, therefore, should not be viewed as truly representative of the Army, nor should the findings reported here be casually generalized to the Army as a whole.

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[1] The survey questionnaire was not administered to personnel at Fort Richardson, Alaska. Different units were surveyed within the same divisional commands headquartered at Frankfurt and Bad Kreuznach, West Germany.

The military and social background characteristics of respondents in the sample are listed in Appendix E. Variations occur in the number of respondents used in the calculation of statistics because of occasional missing data.

Development of Reliability Test Samples. — In order to provide a check on the reliability of the results at all stages in the analysis, the respondents were divided randomly into two groups matched by rank, race, educational level, site at which the respondents were surveyed, and specific survey sessions within each site. Of the 1564 respondents in the final sample, 755 were included in the developmental sample (the sample on which the initial analyses were done) and 809 in the replication sample (the sample on which the reliability of the results obtained using the developmental sample was tested). To ensure comparability of results, the two samples were compared with regard to the distribution of age, unit types, prisoner status, marital status, and other variables. The initial randomization had to be rejected because prisoners were seriously over-represented in one of the samples, but a second randomization proved satisfactory.

Scale Construction Procedures. — The creation of scales from the a priori item categories involved the use of the Guttman-Lingoes nonmetric data analysis programs (see below). The first step in the creation of a scale from an item pool was the elimination of items which were too badly skewed or too poorly related to the main body of items to contribute reliable variance to the main scale score. The second step was the determination of the dimensionality of the remaining items in the pool by nonmetric factor analysis (Guttman-Lingoes, 1971; Lingoes, 1973; Lingoes and Guttman, 1967). This step was skipped when the number of items in the pool was so small that splitting the scale would have been fruitless. In the case of the more critical scales, nonmetric factor analyses were also carried out separately for various stratifications of the respondents by type of unit, race, rank, educational level, and prisoner status. Only those items which loaded on comparable factors for all subject groupings were included in the final scales. When final scales had been decided upon, reliability coefficients (alpha)[1] were calculated for each scale using both the developmental and replication samples. Coefficient alpha is the basic formula for determining the relia-bility of a psychometric scale or test based on its internal consistency. It

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[1] For a description of each scale, see Appendix A.

represents the expected correlation of the scale with a perfectly reliable alternative form containing the same number of items (Nunnally, 1967, p. 197). A coefficient of .50 is considered modest but acceptable for exploratory research of this kind (see ibid., p. 226). Scales having values above .85 are considered highly acceptable from the standpoint of reliability.

Scale Construction Programs. — Because it was anticipated that non-linear relationships might obtain between some of the variables making up the scales to be used in the analysis, the Guttman-Lingoes conjoint-measurement-correlation program (CM-III) (Lingoes, 1968) was used in both initial and final stages of the construction of the Unit Discipline, Leadership, Military Work Role, Status Concern, and Military Delinquency measures. The purpose of the program is to find the optimum monotone rescaling of the responses to each item so that the correlation between that item and all the other items is maximized; that is, so that each item is maximally correlated with the (presumed) factor underlying the responses to the item set. This procedure maximizes the reliability of the scale. CM-III assumes that the responses to the items are ordinal in nature, in contrast to the usual implicit assumption that the responses are on an interval scale with equal spacing between adjacent alternatives. If, in fact, the equal-spacing interval scale is the best interval scale for measuring the under-lying factor, CM-III will produce that scale, but in many if not most cases some other scale will be more appropriate.

In the case of the data in this study, however, transformation of the item responses by CM-III did not produce any substantial improvements in scale reliability which held up across both developmental and replication samples. There was some tendency for extreme positive responses to be spaced relatively far from the other responses, indicating that the respon-dents tended to reserve the highest marks for especially good performance by their leaders or units, but the effect was not large or reliable enough to have a substantial impact on the outcome of the scaling. Therefore, CM-III rescaling was not employed for any of the scales used in the regression analy-sis.

The conjoint-measurement-multiple-regression program CM-V (Lingoes, 1972) was used in the initial stages of the regression analysis to determine if there might be monotone transformations of the criterion variables such that the linear prediction of them might be improved. Such transformations might be necessary if the relationship between the predictor variables and criterion was strongly nonlinear.

In the case of these data, CM-V did not produce any substantial or replicable improvement in the regression sums of squares and, therefore, only standard linear regression programs were used in the final analysis.

It should be understood that the failure of the CM-III and CM-V programs to improve the reliability or predictive capacity of the scales derived from the survey data does not imply that all the relations among the variables in the study are linear; instead, it implies that if there are nonlinearities the data are sufficiently "noisy" to cover most of them up.

Developing Predictive Models of Discipline. — Following scale development and reliability testing, regression analyses were carried out to determine the predictors of unit discipline and individual delinquency. Analysis of the residuals from the regressions was used to determine if the regression of discipline or delinquency on its predictors was homogeneous across subject groupings. The reliability of the regression results was then tested by comparison with the replication sample, and final regressions were calculated for the sample as a whole.

RESULTS

GENERAL EFFECTS OF EDUCATIONAL LEVEL
AND PRISONER STATUS ON DETERMINATION
OF SCALES AND OTHER ANALYSES

An informal inspection of the interitem correlation matrices for
subjects grouped by educational level and prisoner status for several
of the item sets revealed some substantial differences between groups
with regard to reliability and/or factor structure. Two sets of items,
those for Leadership and Acceptance of Authority, were analyzed in
detail; Tables 8 and 9 describe the differences that were found. In
general, the reliability of the data, as measured by the interitem cor-
relations, is lower for those subjects who have not graduated from high
school or who are inmates of correctional facilities. A Wilcoxon matched-
pairs signed-ranks test of the differences between educational levels
suggests that the differences between the grade-school subjects and the
others is significant at the .005 level for both item sets, and the difference
between non-prisoners and stockade prisoners is significant at the .05
level. These significance levels, however, can only be taken as suggestive
since the correlations within a matrix are not independent. The kinds of
differences apparent in the Leadership and Acceptance of Authority item
sets are apparent in all the other item sets which were examined.

It was decided that although the inclusion of poorly-educated subjects
in the analysis might affect the reliability of the results somewhat,
elimination of these subjects would seriously restrict the generalizability
of the results, so subjects having all levels of education were included in
the subsequent analyses. There did not appear to be any reliable differences
in factor structure as a function of educational level, so it was not deemed
necessary to conduct separate analyses for each educational level--the
different educational groups were assumed to be homogeneous except for
reliability.

It appeared, however, that the differences between stockade prisoners
and non-prisoners might involve more than unreliability; for example, for
non-prinsoners the items III-3 (To what extent do members of your unit
"get over" on their supervisors) and III-23 (To what extent do members of
your unit help each other out) have a correlation of +.244, indicating that
group solidarity and cooperation with supervisors go together. For the
stockard prisoners, however, this correlation is -.375, which indicates

that group solidarity leads to organized opposition to the unit supervisors.
Stockade prisoners were, therefore, eliminated from the succeeding analyses.
The data for the Correctional Training Facility (CTF) subjects were more
similar to the data for non-prisoners than the stockade data were, and there-
fore the CTF subjects were left in the analysis sample.

Table 8

COMPARISON OF CORRELATION MATRICES FOR
LEADERSHIP AND ACCEPTANCE OF AUTHORITY
BY EDUCATIONAL LEVEL

Item Set	Educational Level	N	Minimum Correlation	Maximum Correlation	Mean Correlation	Standard Deviation	Mean Absolute Correlation
	Grade school/ some high school	125	-.223	.585	.177	.204	.221
	High school	381	-.038	.640	.327	.162	.327
	At least some college	216	-.097	.667	.333	.158	.334
	Grade school/ some high school	127	-.096	.476	.177	.162	.203
	High school	386	.017	.557	.305	.151	.305
	At least some college	220	-.043	.577	.275	.168	.279

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	At least some college	220	-.043	.577	.275	.168	.279

Table 9

COMPARISON OF CORRELATION MATRICES FOR
LEADERSHIP AND ACCEPTANCE OF AUTHORITY
BY PRISONER STATUS

Item Set	Prisoner Statue	N	Minimum Correlation	Maximum Correlation	Mean Correlation	Standard Deviation	Mean Absolute Correlation
Leadership (24 items)	Non-prisoners	583	-.012	.595	.314	.152	.314
	CTF inmates	60	-.317	.666	.217	.182	.242
	Stockade inmates	60	-.589	.579	.145	.195	.199
Acceptance of Authority (7 items)	Non-prisoners	593	.002	.563	.288	.150	.288
	CTF inmates	61	-.085	.512	.267	.168	.277
	Stockade inmates	63	-.168	.561	.155	.172	.193

THE CRITERION MEASURES

Military Unit Discipline. --To develop a criterion measure of military unit discipline that might serve this inquiry, as well as suggest a diagnostic organizational development tool for managing and assessing military discipline, a pool of 25 items was constructed and incorporated in the questionnaire (see Section III of the questionnaire, Appendix B). Using the behavioral conceptualization of military discipline described earlier, all but two of the items were designed to measure the respondent's perceptions of some aspect of unit behavior that had been judged by the Army interviewees to be indicative of good or poor unit discipline. The two exceptions were items designed to measure the extent to which unit members were perceived as displaying racial prejudice or letting racial conflict interfere with their work. The two items were included as a precaution against the possibility that thoughts related to racial conflict or prejudice may be suppressed by the interviewees, or simply not mentioned due to a lack of saliency. The researchers felt that the inquiry was particularly susceptible to the latter cause of response bias because of evidence derived from recent research on perceptions of racial discrimination among U.S. Armed Forces personnel. Several independent studies indicate white servicemen are less likely to perceive racial discrimination than are non-whites (U.S. Department of Defense, 1970, pp. 6-7; Borus, Stanton, and Fiman, 1972, p. 1371; Stoloff, et al., 1972, p. 11). Actually, the researchers found that the inclusion of the racial discrimination items was apparently not necessary for the two items were not perceived by the survey respondents as being part of the unit discipline construct, as evidenced by the items' failure to survive the scale testing and development procedures. It is important to note, however, that this finding offers supportive evidence of the validity of the interview process, the interview data, and the interview data analyses described earlier. Here is corroborative evidence that the conceptualization of military discipline derived from the interviews is indeed a valid description of the Army's major perception of the discipline phenomenon. This finding is also supportive of the idea of using the interview technique in exploratory efforts to conceptualize and develop measures of complex social psychological phenomena such as discipline.

To enhance the questionnaire respondents' understanding of the items, many of the item statements were based on phrases and terminology used by the Army interviewees to describe behavioral indicators of discipline. The original item pool contained statements designed to assess the extent to which the respondent perceived members of his unit maintaining and properly wearing their uniforms, ignoring military courtesies, failing to show up on time, keeping their living and working areas in clean and orderly

condition, processing paperwork efficiently, cooperating with each other, letting racial discrimination interfere with their work, readily responding to orders, needing direct supervision to get the job done right, displaying disorderly conduct off post, obeying lawful orders, sitting around on duty hours doing nothing, doing poor quality work, working together as a team, maintaining a high level of combat readiness, doing whatever needs to be done, maintaining a neat personal appearance, performing well without close supervision, volunteering to work past duty hours, displaying racial prejudice, failing to get their hair cut according to regulations, helping each other out, doing just enough work to get by, stealing from each other, and "getting over" on their supervisors.

Dimensional Structure of Unit Discipline. --Preliminary analysis of the original item pool for Unit Discipline for the developmental sample indicated that a single factor could not account adequately for the pattern of correlations. Furthermore, informal comparisons of the interitem correlation matrices for breakdowns of the respondents by unit type, race, rank, prisoner status, and educational level indicated that the dimensional structure of discipline might vary from one group to another. Hence a series of nonmetric factor analyses using the Guttman-Lingoes program SSA-III were carried out for the item set for each group separately using the data in the developmental sample. Nine items were eliminated from the pool because of low communality and/or failure to load consistently on the same factor for all groups; in particular, the items dealing with the effect of racial discrimination on the unit (items III-8 and III-21) were removed from the Discipline item pool and included in one of the racial discrimination scales.

The results of the nonmetric factor analyses indicated that three dimensions were necessary to explain the interitem correlations for combat and support units, while two factors were sufficient for the training units. The items assigned to each scale and their loadings on the factor associated with that scale are shown in Table 10. The three scales have been designated the Military Unit Performance Scale (Discipline I), the Military Unit Appearance Scale (Discipline II), and the Military Unit Conduct Scale (Discipline III). (See Appendix A for detailed description of these scales). The Military Unit Performance Scale contains items having to do with how well the men in the unit carry out their duties--whether they cooperate, work as a team, have high combat readiness, process paperwork efficiently, do what needs to be done, and help each other out. A high score on this scale implies good unit performance. The Military Unit Appearance Scale contains items having to do with neatness of uniforms, cleanliness of living and working areas, and generally neat personal appearance; a high

Table 10

FACTOR LOADINGS* FOR UNIT DISCIPLINE IT
COMBAT, SUPPORT, AND TRAINING U

Factor	Item
Performance	To what extent do members of your unit process paperwork in an efficient manner?
	To what extent do members of your unit cooperate with each other?
	To what extent do members of your unit work together as a team?
	To what extent do members of your unit maintain a high level of combat readiness?
	To what extent do members of your unit do what ever needs to be done?
	To what extent do members of your unit help each other out?
Conduct	To what extent do members of your unit "get over" on their supervisors?
	To what extent do members of your unit fail to show up on time?
	To what extent do members of your unit need direct supervision to get the job done right?
	To what extent do members of your unit display disorderly conduct off-post?
	To what extent do members of your unit sit around on duty hours doing nothing?
	To what extent do members of your unit do poor quality work?
	To what extent do members of your unit do just enough work to get by?
Appearance	To what extent do members of your unit maintain and properly wear their uniforms?
	To what extent do members of your unit keep living and working areas in clean and orderly condition?
	To what extent do members of your unit maintain a neat personal appearance?

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* Factor loadings are from the varimax rotation of the three dimensional solut
items 2, 8, 12, 20, 21, and 22.

Table 10

FACTOR LOADINGS[*] FOR UNIT DISCIPLINE ITEMS FOR
COMBAT, SUPPORT, AND TRAINING UNITS

Item	Combat	Type of Unit Support	Training
...ent do members of your unit process ... in an efficient manner?	-.537	-.581	-.568
...en do members of your unit cooperate ...her?	-.680	-.520	-.621
...en do members of your unit work ...a team?	-.630	-.621	-.385
...en do members of your unit maintain ...o. combat readiness?	-.485	-.569	-.540
...ent do members of your unit do what ...to .e done?	-.488	-.493	-.718
...ent do members of your unit help each	-.612	-.412	-.439
...ent do members of your unit "get over" ...ver isors?	.483	.510	.559
...en. do members of your unit fail to show	.552	.454	.654
...en do members of your unit need direct ...to get the job done right?	.443	.427	.551
...en do members of your unit display ...conduct off-post?	.709	.529	.680
...er do members of your unit sit around ...rs doing nothing?	.467	.568	.674
...ent do members of your unit do poor ...k?	.512	.509	.675
...ent do members of your unit do just ...k to get by?	.515	.571	.488
...ent do members of your unit maintain ...y wear their uniforms?	.548	.670	.424
...ent do members of your unit keep living ...g areas in clean and orderly condition?	.446	.492	.282
...er do members of your unit maintain a ...al appearance?	.626	.597	.256

va. imax rotation of the three dimensional solution for the item set excluding
22.

score on this scale implies good unit appearance. The last scale, Military Unit Conduct, contains items having to do mostly with behavior toward leaders, disorderly conduct, quality of work, and the extent to which the men are slow to work or fail to work without direct supervision; a high score on this scale implies good unit conduct. These three scales, it must be emphasized, are not independent; the correlations in Table 11 indicate clearly that all three scales are closely linked even though they measure what appear to be distinguishable concepts.

A caveat must be entered with respect to the Unit Conduct Scale; all the items in the Scale are negatively worded in the sense that the response "To a very great extent" for these items carries the implications of poor unit conduct, whereas for all the items in the other two Scales that response implies good unit performance or appearance. This situation raises the possibility that the Unit Conduct factor is an artifact attributable to response bias and/or failure of the respondents to read or interpret the items correctly. Nonetheless, even though it is likely that the Unit Conduct Scale is contaminated to some extent by such artifacts, the scale was retained in the regression analysis since it was not possible to rule out the possibility that the Unit Conduct Scale measures a valid factor distinct from the other two Unit Discipline Scales.

Table 11

CORRELATIONS* AMONG MILITARY UNIT
DISCIPLINE INVENTORY SCALES

Performance (I)	1.000		
Appearance (II)	.566	1.000	
Conduct (III)	.536	.465	1.000
	Performance (I)	Appearance II	Conduct (III)

* Product-moment correlations based on 1327 complete cases. All correlations in the table are significant at the .001 level.

THE PREDICTOR MEASURES

Leadership. --Recognizing the paramount importance the Army inter-
viewees' attached to leadership as a determinant of military discipline, a
considerable portion of the questionnaire was devoted to items that might
lead to the development of a reliable measure of leadership characteristics
relevant to unit discipline (see Section I of the survey questionnaire,
Appendix B). Using an essentially behavioral approach to the problem of
conceptualizing leadership, the majority of items included in the original
item pool were designed to measure some aspects of perceived supervisory
behavior that the interviewees deemed to be an important determinant of
discipline. Some of the facets of leadership behavior included were the
degree to which the respondent's supervisor was perceived as being con-
cerned about the welfare of his subordinates, encouraging members of his
command to work together as a team, working right along side his sub-
ordinates, treating his subordinates as individuals, keeping himself
informed with their progress, and helping them to solve their personal
problems. Other less behavioral items were those designed to measure
whether the respondent perceived their immediate supervisor to be
technically competant and sufficiently experienced to perform his duties,
willing to entertain new ideas and accept new ways of doing things, able
to anticipate and solve problems, and able to make decisions quickly and
stick to them.

Of the twenty-three items included in the original item pool, fifteen
were developed especially for this inquiry, eight were adapted from items
contained in the Leadership Behavior Description Questionnaire developed
by Stogdill and others, (Fleishman, 1957, pp. 120-133), and one was taken[1]
from the leadership measures developed by Bowers and Seashore (1966).
As in the case of the previously described unit discipline measures, wherever
possible item statements included terms and phrases derived from the
interviews.

Dimensional Structure of Leadership. --Initial analysis of the Leader-
ship item pool using the Guttman-Lingoes correlational conjoint measure-
ment program CM-III indicated that more than one dimension was necessary

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[1] The authors are grateful to Professor Ralph M. Stogdill, of Ohio State
University, and Professor David G. Bowers, of the Institute of Research,
of The University of Michigan for permitting the use of the items drawn
from the LDBQ and Survey of Organizations instruments.

to account for the data. Nonmetric factor analyses of the item set were carried out for several kinds of subject groupings, including groupings by unit type, rank, race, educational level, and prisoner status. Educational level and prisoner status had the kinds of effects on reliability that were discussed earlier. There was some evidence that the data from training units were less reliable or dimensionally more complex than for other types of units, but in all cases it was clear that two dimensions labeled Leadership I and Leadership II, which were reasonably stable across subject categories, would explain most of the variation. Leadership II appears to be the less reliable dimension. For some categories of subjects, some of the items included in Leadership II had higher loadings on other dimensions. However, the partitioning of the items, as given in Table 12, seemed to give the best fit overall.

It is worthy to note that the items included in the Leadership I scale are all positive items, that is, the response "To a very great extent" is indicative of good leadership for these items, while all the items in the Leadership II set are negative--the response "To a very great extent" implies poor leadership. As in the case of the Discipline III scale, the Leadership II dimension may be an artifact of response bias. Some subjects may have tended to respond with a check mark in the same column regardless of the direction of the item, or may have misread the item, or may have other biases leading to inappropriate responses to negative items. Despite the possibility that the dimension Leadership II might be artifactual, however, it was included in the regression analysis because it could not be demonstrated that the scale was nothing but response bias.

For both Leadership I and Leadership II, a high scale score implies good leadership. For a detailed description of both scales, see Appendix A.

Esprit d'Corps. --Among the principal environmental determinants of Army discipline derived from the interview data, and from the review of prior research and official documentation, was esprit d'corps. There are a variety of definitions of this phenomenon, but the basic idea underlying the concept of esprit d'corps is a sense of commitment to others in one's military unit. This commitment may be manifested in several ways, including the ways in which the soldier perceives others in his unit. That is the approach taken in the development of the esprit measure developed for this inquiry. It is designed to measure the soldier's attitude toward others in his unit in terms of their professional competence, cooperativeness, trustworthiness, and general likeability.

Table 12

FACTOR LOADINGS* FOR LEADERSHIP I AND LEADERSHIP II ITEMS
FOR COMBAT, SUPPORT, AND TRAINING UNITS

Factor	Item	Type of Unit		
		Combat	Support	Training
Leadership I	To what extent is your supervisor concerned about the personal problems of his subordinates?	.713	.589	.714
	To what extent is your supervisor technically competent to perform his duties?	.677	.630	.650
	To what extent does your supervisor keep his subordinates informed?	.696	.586	.667
	To what extent does your supervisor plan ahead?	.667	.632	.636
	To what extent does your supervisor keep himself informed about the work that is being done by his subordinates?	.692	.602	.653
	To what extent does your supervisor communicate effectively with his subordinates?	.690	.684	.675
	To what extent does your supervisor anticipate and solve problems before they get out of hand?	.710	.684	.684
	To what extent is your supervisor willing to make changes in ways of doing things?	.529	.595	.622

Item			
subordinates to work together as a team?			.675
To what extent does your supervisor keep himself informed about the progress his subordinates are making in their work?	.726	.735	.675
To what extent does your supervisor work right along with his men?	.704	.624	.707
To what extent does your supervisor offer new ideas for solving job-related problems?	.681	.682	.676
To what extent does your supervisor know and treat his subordinates as individuals?	.595	.607	.606
To what extent does your supervisor make decisions quickly and stick to them?	.442	.560	.522
Leadership II			
To what extent does your supervisor lack sufficient experience to perform his duties?	.452	.362	.393
To what extent does your supervisor fail to provide for the everyday needs of his subordinates?	.598	.540	.486
To what extent does your supervisor fail to keep his subordinates busy with challenging tasks?	.420	.360	.293
To what extent is your supervisor unwilling to accept responsibility for mistakes made by his subordinates?	.478	.564	.535
To what extent does your supervisor depend too much on threats–rather than rewards–to get things done?	.480	.413	.449
To what extent does your supervisor fail to explain why a particular action is important?	.604	.492	.502
To what extent is your supervisor not aware of his subordinates' capabilities?	.449	.374	.491

*Loadings are from a varimax rotation of the two-dimensional solutions.

The original item pool consisted of seven Likert-type items, three of which were previously used in a measure of "group esprit and solidarity" and reported to lie on the same dimension (Spector, Clark, and Glickman, 1960, p. 309). The remaining items were developed for this inquiry.

Dimensional Structure of Esprit d'Corps. --The item pool for esprit d'corps was judged to be too small (5 items) to justify a factor analysis. Comparisons of the interim correlation matrices for the subjects in the developmental sample stratified by unit type, race, rank, educational level, and prisoner status turned up no significant variations other than the effects on reliability as a function of education level and prisoner status, as discussed earlier. As a result of these findings, the Esprit d'Corps Scale constructed from these items was construed to be an uni-dimensional scale applicable to all types of units and all other subject groupings. For further information on this scale, see Appendix A.

VALIDATION OF THE UNIT DISCIPLINE, LEADERSHIP, AND ESPRIT D'CORPS SCALES

It was possible to test the validity of the Unit Performance, Conduct, and Appearance scales, as well as the leadership and esprit d'corps scales by comparing groups known to vary on such dimensions. Three types of units were available in the sample: prisoner units, elite units, and non-elite units.[1] Although the applicability of the scales to at least some of the prisoner units is questionable, and the prisoners were nominally rating the units they were in prior to confinement rather than their current units, the prisoner units were included in this analysis for completeness.

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[1] For purposes of this analysis, elite units were defined as those units composed of volunteers having special combat training, such as the airborne infantry and Special Forces (Airborne) units included in the field survey, and the units that, by virtue of their mission and resultant selection procedures, admit only soldiers having excellent career records. The Berlin Brigade was used as an example of the latter type of unit. Non-elite units were all other regular Army units included in the survey with the exception of the personnel confinement facilities and correctional training units.

The results of the analyses of variance for each scale are summarized in Table 13. In every case, the mean score for the Elite units is higher than the mean for the Non-Elite units in accordance with the hypothesis that the scales are valid. In two cases, however, the intergroup differences are small enough to raise some question about the validity of the scales. For the scale Leadership II, there is no significant difference between Non-Elite and Elite units, although the average scores for the Prisoner units are significantly lower than both Non-Elite and Elite means. For Leadership I, the difference between Non-Elite and Elite units is statistically significant but rather small--only .16 sigma-units. The fact that the differences are small does not necessarily imply that the scales are invalid since it may in fact be the case that the true differences in leadership between the unit categories may be less than the true differences between the same groups with regard to other factors such as Unit Performance and Esprit d/Corps; however, there is sufficient cause to regard these scales, especially Leadership II, with some suspicion. In any event, since the ultimate test of the validity of a scale is its capacity to predict behavior, both Leadership scales were included in the regression analysis.

One other point worthy of note is the uniformly low rating the prisoners give their previous units. Either the prisoners tend strongly to come from the poorer units in the Army or the prisoners have a tendency to denigrate their previous units and leaders.

Racial Discrimination. --While conducting the field interviews, it became apparent that the officer, NCO, and enlisted respondents were not likely to attribute Army discipline problems to either on-post or off-post racial discrimination. The researchers believed this outcome might be due to several factors. First, as noted earlier, there is considerable evidence that white Army personnel simply do not perceive levels of racial discrimination being as high in their units as their black cohorts do (Stoloff, et al., 1972, p. 11; Borus, Stanton & Fiman, 1972, pp. 1370-71; U.S. Dept. of Defense, 1970, p. 11). Hence, it seems reasonable to assume that the saliency of racial discrimination as an issue influencing soliders' behavior is not likely to be as great for white personnel. Second, the failure to link military delinquency to racial matters may be a result of social desirability response style-the tendency to "fake good" when responding to the questionnaire. Soldiers, and especially officers and NCO's, may be reluctant to identify racial problems in their units and wish to downplay such issues because of current pressures to eliminate racial tensions by their commanders. And third, the differences in perceptions between blacks and whites may also be the product of racially "polarized pre-Army attitudes and expectations, which selectively filter the daily experiences [of whites and non-whites] to produce contrasting perceptions of Army life" (Borus, J.F., et al., pp. 1371-72).

Table 13

KNOWN-GROUPS VALIDATION OF THE UNIT
PERFORMANCE, UNIT CONDUCT, UNIT APPEARANCE,
LEADERSHIP I, LEADERSHIP II, A ND ESPRIT D' CORPS SCALES

Scale	Results of ANOVA			
Unit Performance	Overall $F(2, 1551) = 54.59$, $p < .0001$			
	Unit Type	N	Mean	Std. Dev.
	Prisoner	275	2.79	.827
	Non-Elite	913	3.10	.808
	Elite	366	3.47	.866
	Comparison of	Difference	T	Significance
	Prisoner vs. Non-Elite	.313	5.52	.0001
	Prisoner vs. Elite	.678	10.30	.0001
	Non-Elite vs. Elite	3.65	7.15	.0001
Unit Conduct	Overall $F(2, 1553) = 20.08$, $p < .0001$			
	Unit Type	N	Mean	Std. Dev.
	Prisoner	275	3.11	.825
	Non-Elite	915	3.28	.821
	Elite	366	3.52	.891
	Comparison of	Difference	T	Significance
	Prisoner vs. Non-Elite	.165	2.87	.005
	Prisoner vs. Elite	.410	6.13	.0001
	Non-Elite vs. Elite	.245	4.73	.0001
Unit Appearance	Overall $F(2, 1554) = 18.77$, $p < .0001$			
	Unit Type	N	Mean	Std. Dev.
	Prisoner	276	3.31	.916
	Non-Elite	915	3.43	.855
	Elite	366	3.70	.879
	Comparison of	Difference	T	Significance
	Prisoner vs. Non-Elite	.115	1.91	
	Prisoner vs. Elite	.391	5.63	.0001
	Non-Elite vs. Elite	.277	5.13	.0001

Table 13 (cont'd)

KNOWN-GROUPS VALIDATION OF THE UNIT
PERFORMANCE, UNIT CONDUCT, UNIT APPEARANCE,
LEADERSHIP I, LEADERSHIP II, AND ESPRIT D'CORPS SCALES (Cont.)

Scale	Results of ANOVA			
Leadership I	Overall $F(2, 1553) - 80.12$, $p < .0001$			

Unit Type	N	Mean	Std. Dev.
Prisoner	276	2.53	.742
Non-Elite	915	3.19	.887
Elite	365	3.33	.879

Comparison of	Difference	T	Significance
Prisoner vs. Non-Elite	.668	11.30	.0001
Prisoner vs. Elite	.807	11.75	.0001
Non-Elite vs. Elite	.139	2.60	.01

Leadership II Overall $F(2, 1552) = 9.21$, $p < .0001$

Unit Type	N	Mean	Std. Dev.
Prisoner	276	3.30	.806
Non-Elite	914	3.50	.766
Elite	365	3.55	.843

Comparison of	Difference	T	Signigifance
Prisoner vs. Non-Elite	.203	3.73	.0005
Prisoner vs. Elite	.256	4.06	.0001
Non-Elite vs. Elite	.053	1.08	

Esprit d'Corps Overall $F(2, 1535) = 49.15$, $p < .0001$

Unit Type	N	Mean	Std. Dev.
Prisoner	269	3.68	1.12
Non-Elite	906	4.19	1.06
Elite	363	4.53	1.07

Comparison of	Difference	T	Significance
Prisoner vs. Non-Elite	.510	6.84	.0001
Prisoner vs. Elite	.855	9.91	.0001
None-Elite vs. Elite	.346	5.19	.0001

Regardless of what caused this discrepancy, it undoubtedly reduced the frequency with which racial discrimination was mentioned as a factor affecting Army discipline. And because of the significantly larger portion of whites and higher ranking personnel interviewed, it also undoubtedly reduced the probability that racial discrimination would emerge from the summarization of the interview data as a leading determinant of military discipline.

There was, on the other hand, considerable evidence that racial tensions and conflicts are associated with military discipline problems. The interviewers encountered numerous reports of incidents involving assaults between groups of soldiers divided along racial lines at many of the posts they visited. McCubbin, et al. (1971, p. 31), offer empirical evidence that Army "units with minimal AWOL problems are characterized by less conflict between races." And, as noted by Borus, Stanton and Fiman, (1972, p. 53), "In the last few years interracial conflicts have been reported on military posts throughout the United States and Asia."

In view of this evidence, and in light of the probable bias in the interview data due to the preponderance of whites and high ranking respondents and social desirability response set, it was decided to include perceived racial discrimination in the research design as a possible predictor of discipline and develop a pool of Likert-type items for inclusion in the survey questionnaire to measure this phenomenon.

The racial discrimination items included in the questionnaire were designed to measure the respondent's perception of the levels of racial discrimination--within both the respondent's military and off-post civilian environments, as well as in society in general. Items to measure the respondent's perception of discrimination were selected from scale items originally used to measure perceived racial discrimination among Marine and Navy personnel (Stoloff, et al., 1972, Appendix C), and subsequently used to measure racial discrimination perceptions among Army personnel. Four items designed to measure perceptions of off-post racial discrimination and discrimination against soldiers in general were also developed for inclusion in the questionnaire.

Dimensional Structure of Racial Discrimination.--Correlation matrices for the items dealing with racial discrimination were inspected for different subject groupings split by type of unit, rank, prisoner status, educational level, and race. When subjects were categorized by race all subjects who were neither black nor white were placed in an "other" category. Gross differences were observed between the correlation matrix for blacks and that for whites; the correlation matrix for "others" tended to resemble

that of the blacks. Nonmetric factor analyses were carried out for each racial group; the results of these analyses were inspected in an attempt to determine a set of one or more scales applicable to all races. Five of the original sixteen items were eliminated using this process, and the remaining eleven units were partitioned into a Unit Racial Discrimination Scale and a General Racial Discrimination Scale. The items and their factor loadings are shown in Table 14. The items in the Unit Racial Discrimination Scale all deal with discrimination specifically within the respondent's unit, whereas the General Racial Discrimination Scale items deal with discrimination in the Army or society as a whole and the local off-post civilian environment. A high score on either discrimination scale implies a high decree of perceived discrimination.

It is obvious from the factor loadings that not all of the respondents would agree with the partitioning of the items, but it seems the best compromise available under the circumstances. Given the somewhat confused situation, one should hesitate before assuming that apparently corresponding dimensions measure the same underlying construct for all races. For further information on the scales, see Appendix A.

Military Work Role.--As reported earlier and illustrated in Figure 1, elements of the military work role were perceived by the Army interviewees as having considerable impact on military discipline. Of particular importance were unit policies, working conditions, co-workers, the relevance and quality of training received, the unit mission, the importance of daily jobs assigned, and the types and relevance of MOS assignments. There were also related elements of job satisfaction as indicated by a sense of accomplishment from daily activities within the unit, an expressed interest in the work assigned, a satisfaction with an Army career, and a desire to pursue an Army career.

To develop a measure of these phenomena, a pool of fifteen Likert-type items was developed. Two items were eliminated during preliminary item analyses due to their lack of communality with the other items as evidenced by low interitem correlation values. All of the items were designed to measure the respondent's perceptions of various facets of the military work role that the Army interviewees reported as having a substantial impact on Army discipline.

Dimensionality of Military Work Role. --Upon inspecting the interitem correlation matrices for the item pool, it was determined that the unidimensionality of the item set was sufficiently evident to make factor analysis unnecessary.

Table 14

FACTOR LOADINGS* FOR RACIAL I
ITEMS BY RACIAL GRO

Scale	Item	Blacks Factor I	Facto
Unit Discrimination	To what extent do members of your unit let racial conflicts interfere with their work?	-.038	-.740
	To what extent do members of your unit display racial prejudice?	.363	-.501
	Whites in my unit have a good reason to distrust non-whites.	.101	-.313
	Non-whites in my unit have good reason to distrust whites.	.368	-.596
General Discrimination	The Army should make a greater effort to assist non-whites to qualify for enlistment and technical ratings.	.562	.029
	Members of minority groups have a harder time in the Army than others.	.530	-.179
	White soldiers are punished less severely than non-whites for the same offenses.	.515	-.300
	The Army should recognize that it is not always fair to apply test standards to minority groups that have been developed for whites.	.419	-.263
	Commanding officers should be more responsive to the needs of minority group members.	.490	-.219
	There is so much discrimination against minority soldiers by local civilians, minority soldiers don't want to leave the post.	.400	-.200
	Local landlords discriminate against non-whites.	.501	-.14

* From a normalized varimax rotation of the two-dimensional solution

Table 14

FACTOR LOADINGS[*] FOR RACIAL DISCRIMINATION ITEMS BY RACIAL GROUP

Item	Blacks		Whites		Others	
	Factor I	Factor II	Factor I	Factor II	Factor I	Factor II
t do members of racial conflicts eir work?	-.038	-.740	.074	.618	.234	-.324
t do members of racial prejudice?	.363	-.501	.074	.642	.171	-.381
unit have a good rust non-whites.	.101	-.313	-.041	.794	-.105	-.686
my unit have good trust whites.	.368	-.596	-.515	.090	.463	.328
d make a greater st non-whites to ment and technical	.562	.029	-.516	-.160	.718	.120
minority groups have the Army than	.530	-.179	-.445	-.158	.611	-.076
s re punished less n-whites for the s.	.515	-.300	-.506	.046	.516	-.323
recognize that it fair to apply test minority groups that ped for whites.	.419	-.263	-.452	-.192	.474	-.264
officers should be to the needs of members.	.490	-.215	-.510	.029	.490	-.277
discrimination soldiers by local nority soldiers don't th post.	.400	-.200	-.478	.012	.390	-.447
rds discriminate against	.501	-.140	-.458	-.192	.420	-.390

tion of the two-dimensional solution for each racial category.

The stability and generality of the interitem correlations was explored by calculating matrices for the respondents in the developmental sample stratified by type of unit (combat, support, training, or correctional), rank, race, educational level, and prisoner versus non-prisoner status. No significant differences between groups were observed except for the effects of educational level and prisoner status as discussed earlier in this report.

The internal consistency of the scale was exceptionally high, especially considering the item sets were not the product of factor analysis (See Appendix A). A high score on the work role scale implies favorable perceptions of the military work role.

Recreational Availability. --The availability of recreational facilities did not in and of itself emerge from the interview data as a principle determinant of Army discipline. On the other hand, many facets of unit discipline and indiscipline were perceived by the interviewees to be the consequences of a lack of meaningful, interesting, and challenging things to do. Therefore, departing from the inductive approach somewhat, the researchers included in the questionnaire items to measure the availability of recreational facilities on or near the respondent's post.

The Recreational Availability Index was calculated by summing the untransformed responses to the recreational availability items across all facilities mentioned in the questionnaire (See Section VI of the questionnaire, Appendix B or the description of the measure in Appendix A). No attempt was made to determine the dimensionality of the item set since the availability of recreational facilities is presumably a reflection of objective conditions subject to arbitrary changes, and thus not suitable for factor analysis.

Social Desirability. --A set of items intended to measure the tendency of persons to respond to survey items on the basis of what they believe is the most socially desirable way - generally to achieve the approval of others - was included in the questionnaire (See Section V of the questionnaire, Appendix B and discussion of this measure in Appendix A). If a social desirability scale could be constructed, the researchers intended to use the measure to screen out respondents who were prone to this form of response style, and thereby improve the reliability of the survey data. To develop a social desirability scale, ten items were selected from the 33-item social desirability scale developed by Crowne and Marlowe (1964; also reported

in Robinson and Shaver, 1969, pp. 640-643 (See Section V of the questionnaire, Appendix B and Appendix A).[1] The items were evenly balanced between "deny bad quality" items and "claim good quality" items. Unfortunately, the response data proved to be too unreliable for a scale to be formed. Even when the less reliable data derived from the correctional unit inmates and trainees were eliminated from the development sample data, the mean correlation among the items increased to only .100--the minimum correlation was -.058 and the maximum was .234. No suitable subset of the items could be found for which the reliability of the scale was substantially higher, and so the attempt to form a scale was abandoned.

PREDICTION OF MILITARY UNIT DISCIPLINE

--THE PREDICTOR VARIABLES

Ten environmental variables were included in the regression analyses of unit discipline: Leadership I, Leadership II, Work Role, Esprit d'Corps, Unit Racial Discrimination, General Racial Discrimination, Recreational Availability, Financial Problems, Satisfaction with Living Quarters, and Sexual Satisfaction. These scales and items were included in the analysis as predictors because it was felt that they were diagnostic of conditions within the respondents' units which might relate to unit discipline.

Descriptive measures for all the variables in the regression analyses can be found in Table 15, and the correlation matrix for the predictors is in Table 16. The overall correlations between the predictors and criteria are in Table 17.

It should be clear from the inter-predictor correlations that we are not dealing with a clean set of independent predictors: in fact, some of the most crucial predictors such as Leadership I, Esprit d'Corps, and Military Work Role, are very intimately related. Even Recreational Availability, which one would expect to be orthogonal to most of the other variables, instead is closely associated with Leadership I, Work Role, and Esprit d'Corps. The implication of these correlations seems to be that, at least as these respondents see the situation, those units which are well off in one regard tend to be well off in all regards, and vice versa.

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[1] The authors are grateful to Professor David Marlowe of the University of California, Santa Cruz, for authorizing the use of the scale items.

Table 15

DESCRIPTIVE MEASURES FOR
MILITARY UNIT DISCIPLINE SCALES
AND PREDICTORS

Variable	N^a	Mean	Standard Deviation	Range
Unit Performance	1554	3.14	.853	1 to 5
Unit Appearance	1557	3.47	.881	1 to 5
Unit Conduct	1556	3.31	.849	1 to 5
Leadership I	1556	3.11	.904	1 to 5
Leadership II	1555	3.48	.796	1 to 5
Work Role	1557	2.93	.975	1 to 4.92
Esprit d'Corps	1538	4.18	1.106	1 to 6
Unit Racial Discrimination	1535	0.00^b	.679	-1.01 to 1.95
General Racial Discrimination	1521	3.28	1.230	1 to 6
Recreation Availability	1548	3.09	.761	1 to 5
Financial Problems[c]	1446	2.52	1.33	1 to 5
Satisfaction w/Quarters[d]	1534	2.71	1.49	1 to 5
Sexual Satisfaction[e]	1513	2.78	1.59	1 to 5

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[a] Number of cases out of the complete sample of 1564 cases, stockade prisoners included.

[b] Unit racial discrimination was calculated as the sum of standardized variables.

[c] Questionnaire item VII-21: "To what extent are you bothered by financial problems?"

[c] Questionnaire item VIII-9: "How satisfied are you with your present living quarters?"

[e] Questionnaire item VIII-18: "Since being assigned to this post, now satisfied have you been with your opportunities for having sexual relations?"

Table 16

CORRELATIONS AMONG PREDICTORS OF UNIT DISCIPLINE[a]

Variable	Leadership I	Leadership II	Military Work Role	Esprit d' Corps	General Racial Discrimination
Leadership II	.376***				
Work Role	.588***	.282***			
Esprit d'Corps	.450***	.238***	.475***		
General Racial Discrimination	-.125***	-.063*	.002	-.160***	
Unit Racial Discrimination	-.290***	-.203***	-.269***	-.470***	.260***
Recreational Availability	.372***	.077**	.416***	.340***	-.061*
Financial Problems	-.198***	-.142***	-.181***	-.164***	.118***
Satisfaction with Living Quarters	.195***	.065*	.261***	.198***	-.042
Sexual Satisfaction	.114***	.036	.232***	.144***	.016

Variable	Unit Racial Discrimination	Recreational Availability	Financial Problems	Satisfaction w/ Living Quarters
Recreational Availability	-.199***			
Financial Problems	.186***	-.144***		
Satisfaction w/ Living Quarters	-.080**	.256***	-.132***	
Sexual Satisfaction	-.107**	.246***	-.088**	.236***

* $p < .05$, two-tailed
** $p < .01$
*** $p < .001$
a   For 1326 complete cases (including stockade prisoners) out of 1564.

Table 17

CORRELATIONS OF SITUATIONAL PREDICTORS
WITH UNIT PERFORMANCE, APPEARANCE AND
CONDUCT FOR ENTIRE SAMPLE (N=1481)

| Predictor | Criterion Variable | | |
| | Unit | Unit | Unit |
Variable	Performance	Appearance	Conduct
Leadership I	.311***	.292***	.540***
Leadership II	.090***	.218***	.198***
Military Work Role	.267***	.328***	.509***
Esprit d'Corps	.399***	.473***	.600***
General Racial Discrimination	-.100***	-.031	-.096***
Unit Racial Discrimination	-.223***	-.377***	-.323***
Recreational Availability	.187***	.161***	.350***

* $p < .05$, two-tailed

** $p < .01$, two-tailed

*** $p < .001$, two-tailed

REGRESSION ANALYSIS OF MILITARY UNIT DISCIPLINE SCALES--METHODS

For each of the Unit Discipline criteria, the regression of the criterion on the environmental predictors was calculated for the developmental sample. Respondents who were stockade prisoners or who had missing data for their unit type were excluded. To test for the possibility that the regressions were different for different subject categories, one-way analyses of variance were carried out on the residuals of the regression by unit category (combat, support, and training), race, rank category (three levels: E1-E2, E3-E4, E5-E9), educational level, and career intent (whether the respondent intended to remain in the Army). If the analyses of the residuals indicated substantial intergroup differences, the regressions were recalculated for each group separately. When final regressions had been calculated for the developmental sample, parallel regressions were carried out in the replication sample, the results were compared, and then the regressions were carried out again for the developmental and replication samples combined. The analyses of residuals were not repeated in the replication sample.

Table 18

ANALYSIS OF VARIANCE OF REGRESSION
RESIDUALS BY UNIT TYPE

Source	df	Sum of Squares	Mean Square	F	Significance
Between units	3	6.843	2.281	6.26	.0005
Within units	636	231.9	.3646		
Total	639	238.8			

Unit Type	N	Mean	Std. Dev.
Combat	358	.0775	.5994
Support	149	-.1765	.6297
Training	72	-.0264	.6014
CTF	61	.0074	.5667

PREDICTION OF UNIT PERFORMANCE--RESULTS

Analysis of variance of the residuals of the initial regression of Unit
Performance discloses large, systematic differences among the unit
types. Table 18 contains the ANOVA results; the original equation tended
to underestimate performance for combat units and overestimate it for
support units, the difference between the two being .25 scale units. The
other kinds of units fell between combat and support. Following this
finding, all analyses of Unit Performance were carried out separately for
all unit types except correctional. Correlations of the predictors with the
Unit Performance Scale are given separately for each unit category in
Table 19.

Table 19

CORRELATIONS OF ENVIRONMENTAL PREDICTORS WITH UNIT PERFORMANCE BY UNIT TYPE

Variable	Combat (N=645)	Support (N=281)	Training (N=142)
Leadership I	.589***	.473***	.511***
Leadership II	.236***	.240**	.104
Work Role	.547***	.475***	.471***
Esprit d'Corps	.657***	.563***	.393***
General Racial Discrimination	-.081*	-.028	.043
Unit Racial Discrimination	-.357***	-.282**	-.317***
Recreational Availability	.319***	.390***	.299***
Financial Problems	-.162**	-.210**	-.007
Satisfaction with Living Quarters	.073	.259**	.329***
Sexual Satisfaction	.205***	.130*	.004

* $p < .05$, two tailed
** $p < .01$
*** $p < .001$

When regression coefficients were calculated within unit categories for both the developmental and replication samples, comparisons of the coefficients revealed no differences that could not be attributed to sampling variation. Comparability of the results was further tested by using the coefficients from the first sample to predict Unit Performance in the replication sample. For all three unit categories, the regression proved to be unbaised (no significant difference in the mean of the residuals between samples; student's t-values ranged from 1.1 to -.17) and of nearly equal predictive capacity in both samples (the variance of the residuals did not increase dramatically from the developmental to the replication sample--the maximum F-ratio was 1.47 for the support units; although this value of F was significant at the .05 level the magnitude of the ratio is not such as to indicate major differences between the samples). These results indicated that stable relationships were present in the data and that the two samples were fully comparable.

The regression data for the entire sample are presented in Tables 20, 21, and 22; Figures 2, 3, and 4 graphically present the results. The predictor variables account for about half of the variation of the criterion across all unit types, indicating that the regression models have excellent predictive power.

For combat and support units the leading predictor is clearly Esprit d'Corps, but for training units it ranks third. Combat Unit Performance[1] seems to be affected relatively little by such physical environment factors as availability of recreational facilities or quality of living quarters; for combat units high Esprit d'Corps, good leadership, and satisfaction with work roles seem to be sufficient to ensure high performance. For support units, however, even though Esprit d'Corps, leadership and attitudes toward work roles are important, good living conditions clearly contribute to good performance.

For training units the pattern of prediction is rather different; Esprit assumes a tertiary role, possibly because the trainees have not been together as a unit long enough to develop it. Leadership I assumes the role vacated by Esprit, with quality of living quarters next.

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[1] The negative regression coefficients for satisfaction with living quarters and Leadership II are attributable to the fact that these measures are correlated with the other predictors, and may be ignored.

Table 20

REGRESSION OF UNIT PERFORMANCE ON

SITUATIONAL PREDICTORS FOR COMBAT UNITS

Predictor Ranking	Variable	Partial Correlation	Unnormalized Regression Coefficient	Significance Level
1	Esprit d'Corps	.433	.333 +- .028	.0001
2	Leadership I	.305	.287 +- .036	.0001
3	Military Work Role	.134	.115 +- .034	.001
4	Quality of Living Quarters	-.108	-.045 +- .016	.01
5	Leadership II	-.079	-.066 +- .033	.05
6	Sexual Satisfaction	.066	.025 +- .015	
7	Unit Racial Discrimination	-.043	-.044 +- .041	
8	Recreational Availability	.031	.006 +- .007	
9	Financial Problems	-.017	-.008 +- .018	
10	General Racial Discrimination	-.005	-.003 +- .020	
	Constant Term		.788 +- .181	.0001

N = 645

Overall Test of Regression: $F(10, 634) = 75.30$, $p < .0001$

Multiple Correlation: .738

Percentage of Variance Explained: 54.3

Standard Error of Residuals: .585

Table 21

REGRESSION OF UNIT PERFORMANCE ON
SITUATIONAL PREDICTORS FOR SUPPORT UNITS

Predictor Ranking	Variable	Partial Correlation	Unnormalized Regression Coefficient	Significance Level
1	Esprit d'Corps	.344	.269± .045	.0001
2	Military Work Role	.169	.139± .049	.01
3	Leadership I	.164	.158± .058	.01
4	Recreational Availability	.162	.148± .055	.01
5	Quality of Living Quarters	.156	.070± .027	.05
6	Financial Problems	-.105	-.055± .031	
7	General Racial Discrimination	.083	.045± .033	
8	Sexual Satisfaction	-.070	-.030± .026	
9	Unit Racial Discrimination	-.037	-.039± .064	
10	Leadership II	-.005	-.004± .056	
	Constant Term		.401± .309	

$N = 281$

Overall Test of Regression: $F(10, 270) = 22.21$, $p < .0001$

Multiple Correlation: .672

Percentage of Variance Explained: 45.1

Standard Error or Residuals: .625

Table 22
REGRESSION OF UNIT PERFORMANCE ON
SITUATIONAL PREDICTORS FOR TRAINING (BCT/AIT) UNITS

Predictor Ranking	Variable	Partial Correlation	Unnormalized Regression Coefficient	Significance Level
1	Leadership I	.371	.382± .084	.0001
2	Quality of Living Quarters	.254	.118± .039	.005
3	Esprit d'Corps	.202	.151± .064	.05
4	Unit Racial Discrimination	-.158	-.187± .102	.10
5	Leadership II	-.107	-.094± .076	
6	Military Work Role	.102	.108± .092	
7	Financial Problems	.086	.043± .043	
8	Recreational Availability	.059	.051± .075	
9	Sexual Satisfaction	-.037	-.016 ± .037	
10	General Racial Discrimination	-.012	-.007± .051	
	Constant Term		.727± .447	

N = 142

Overall Test of Regression: $F(10, 131) = 10.33$, $p < .0001$

Multiple Correlation: .664

Percentage of Variance Explained: 44.1

Standard Error or Residuals: .615

Predictors*

Criterion

Esprit
d'Corps

Partial
r = .433

Combat Unit Performance

Leadership I

Partial
r = .305

Total
Variance
Explained

r^2 = .543

Work
Role

Partial
r = .134

*Size of predictor circles is proportional to
amount of variance explained in the criterion.
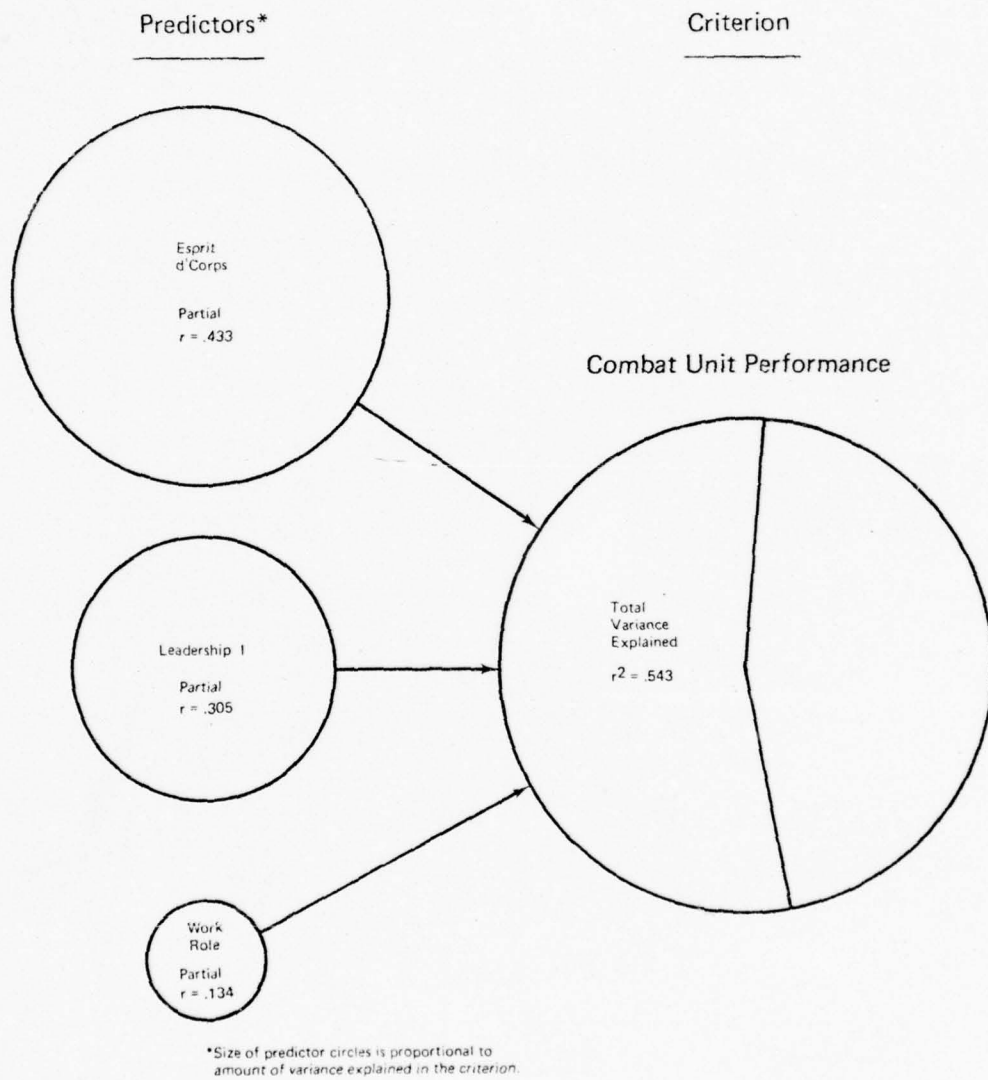
Figure 2   Principal Predictors of Army Unit Performance
(Discipline I) in Combat Units

59
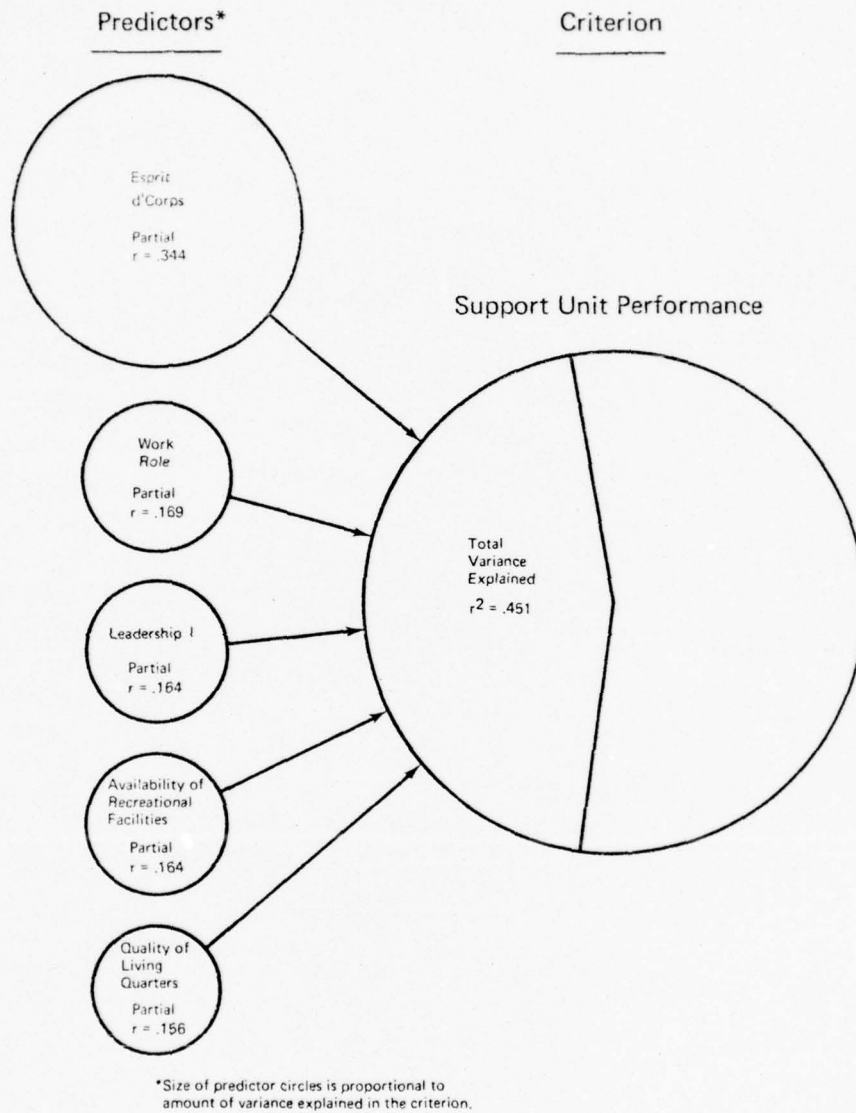
Figure 3 Principal Predictors of Army Unit Performance (Discipline I) in Support Units
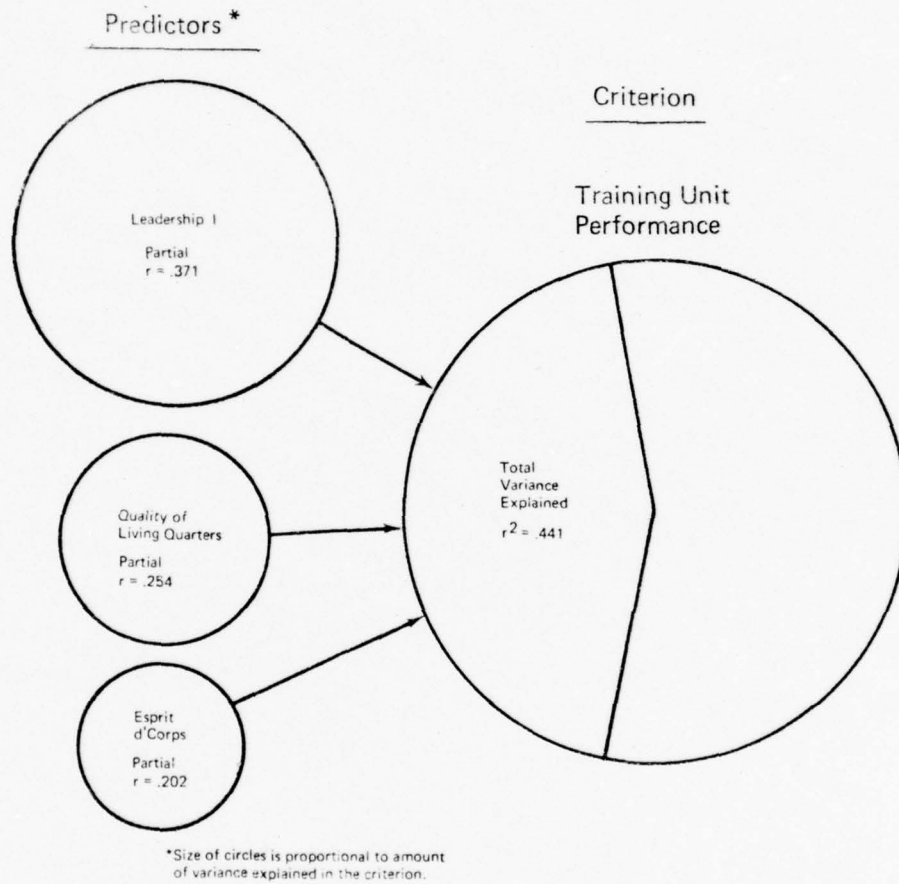
Figure 4 Principal Predictors of Army Unit Performance
(Discipline I) in Training Units

Although, strictly speaking, the regression models should not be
applied to inmates of correctional institutions because of the problems
discussed in previous sections, the analysis was carried out for the sake
of completeness and the results appear in Table 23. The regression co-
efficients for the prisoners seem to tend to resemble those of the combat
units.

Table 23

REGRESSION OF UNIT PERFORMANCE ON PRE-CONFINEMENT
SITUATIONAL PREDICTORS FOR STOCKADE/CORRECTIONAL
TRAINING FACILITY INMATES

Predictor Ranking	Variable	Partial Correlation	Unnormalized Regression Coefficient	Significance Level
1	Esprit d'Corps	.410	.293± .044	.0001
2	Leadership I	.204	.202± .065	.005
3	Recreational Availability	.162	.169± .069	.05
4	Sexual Satisfaction	.146	.062± .028	.05
5	Military Work Role	.122	.104± .057	
6	Leadership II	.112	.090± .053	
7	Financial Problems	.071	.034± .032	
8	General Racial Discrimination	-.069	-.037± .035	
9	Quality of Living Quarters	-.029	-.014± .034	
10	Unit Racial Discrimination	.010	.011± .071	
	Constant Term		.122± .318	

N = 232

Overall Test of Regression: $F(10, 221) = 15.92$, $p < .0001$

Multiple Correlation: .647

Percentage of Variance Explained: 41.9

Standard Error of Residuals: .647

To test for possible baises in the regression models, one-way analyses of variance were carried out in the developmental sample on the residuals of the regression. The sample was stratified by racial category (black, white, or other), rank, educational level, marital status, and mode of entry into the Army. The results are summarized in Table 24. Only two effects seem to be worthy of note: first, in combat units the regression equations seem to overestimate Unit Performance by about .15 scale units for ranks E5-E9 relative to ranks E1-E4; second, again in combat units only, the equations overestimate Unit Performance on the data for married respondents and underestimate it for single respondents, the difference being .20 scale units. Both of these effects would seem to indicate a tendency toward overoptimism on the part of higher ranking and/or senior members of the unit in question but neither effect seemed to be of sufficient magnitude or generality to warrant further analysis.

Table 24

SUMMARIES OF ANALYSES OF VARIANCE OF THE RESIDUALS FROM THE REGRESSION OF UNIT PERFORMANCE

Variable used to Stratify the Sample	Unit Type	Mean Value of Residuals			Differences in Variance of Residuals[a]		
		F	df	Significance	F	df	Significance
Race	Combat	2.15	2,352		.29	2,93925	
	Support	.03	2,143		1.86	2,11421	
	Training	.27	2,66		2.77	2,4014	
Rank	Combat	3.21	2,354	.05	.08	2,160190	
	Support	.45	2,145		.04	2,25797	
	Training	1.61	2,69		.11	2,677	
Education	Combat	1.79	5,350		.94	5,2192	
	Support	1.16	4,144		1.00	4,504	
	Training	.66	5,65		3.62	5,296	.05
Marital Status	Combat	2.92	3,352	.05	.48	3,3142	
	Support	.30	3,145		1.04	2,1954	
	Training	.01	1,70		1.64	1,5423	
Entrance Status	Combat	.47	3,339		.96	3,1112	
	Support	.09	2,146		.81	2,3262	
	Training	.30	3,67		.10	2,81	

[a] Box's test for equality of variances (Box, 1949)

PREDICTION OF UNIT APPEARANCE--RESULTS

Analysis of variance of the residuals from the original regression of Unit Appearance indicated no significant intergroup differences as a function of unit type, race, rank, educational level, marital status or mode of entry into the Army. Comparison of the regression equations for the developmental and replication samples revealed no substantial differences.

Subjects who were in training units, were however, excluded from the analysis because the results obtained during the scaling procedure indicated that for training units, Unit Apperance does not constitute a separate dimension of variation (See section entitled DIMENSIONAL STRUCTURE OF UNIT DISCIPLINE above).

The regression data for the entire subject pool are presented in Table 25 and represented diagrammatically in Figure 5. Military Unit Apperance is considerably less predictable than Unit Performance; less than 20 percent of the variance is predictable, as compared to a minimum of 44 percent for Unit Performance. Esprit d'Corps and Leadership I account for virtually all of the predictable variation.

PREDICTION OF UNIT CONDUCT--RESULTS

Analysis of variance of the residuals from the original regression of Unit Conduct indicated substantial differences between unit categories $(F(3, 1435) = 6.94, p < .0005)$. The principal differences seemed to be between training units and all other kinds of units, the magnitude of the largest difference being .21 scale units between support and training units. Accordingly, regression analyses were carried out separately for training units and combat and support units combined. Other analyses of residuals indicated no significant differences, either by rank, race, educational level, marital status, or mode of entry into the Army. Inspection of the regression equations obtained from the developmental and replication samples indicated no signficant differences between the equations.

The results for the entire sample by unit category are presented in Tables 26 and 27, and the results for all unit types pooled are illustrated in Figure 6. Unit Conduct is more predictable than Unit Appearance but less predictable than Unit Performance. For combat and support units, Esprit d'Corps is again the best predictor, followed closely by Unit Racial Discrimination. The other statistically significant predictors--Work Role, General Racial Discrimination, and Leadership II--account for relatively little additional variance.

For training units, Esprit d'Corps and Unit Racial Discrimination are again the most prominent predictors, but the ordering among the relatively unimportant predictors following those two is drastically different from the ordering of the same variables for combat and support units.

Table 25

REGRESSION OF UNIT APPEARANCE ON

SITUATIONAL PREDICTORS (TRAINING UNITS EXCLUDED)

Predictor Ranking	Variable	Partial Correlation	Unnormalized Regression Coefficient	Significance Level
1	Esprit d'Corps	.288	$.275 \pm .027$	.0001
2	Leadership I	.113	$.137 \pm .035$	.0001
3	Leadership II	-.050	$-.055 \pm .032$	.05
4	Financial Problems	.041	$.026 \pm .018$	
5	Military Work Role	.026	$.029 \pm .032$	
6	Sexual Satisfaction	-.024	$-.013 \pm .016$	
7	Quality of Living Quarters	-.020	$-.011 \pm .017$	
8	General Racial Discrimination	-.013	$-.008 \pm .020$	
9	Recreational Availability	.005	$.006 \pm .036$	
10	Unit Racial Discrimination	-.005	$-.007 \pm .040$	
	Constant Term		$1.977 \pm .182$	.0001

$N = 1159$

Overall Test of Regression: $F(10, 1148) = 26.49$, $p < .0001$

Multiple Correlation: .433

Percentage of Variance Explained: 18.8

Standard Error of Residuals: .801
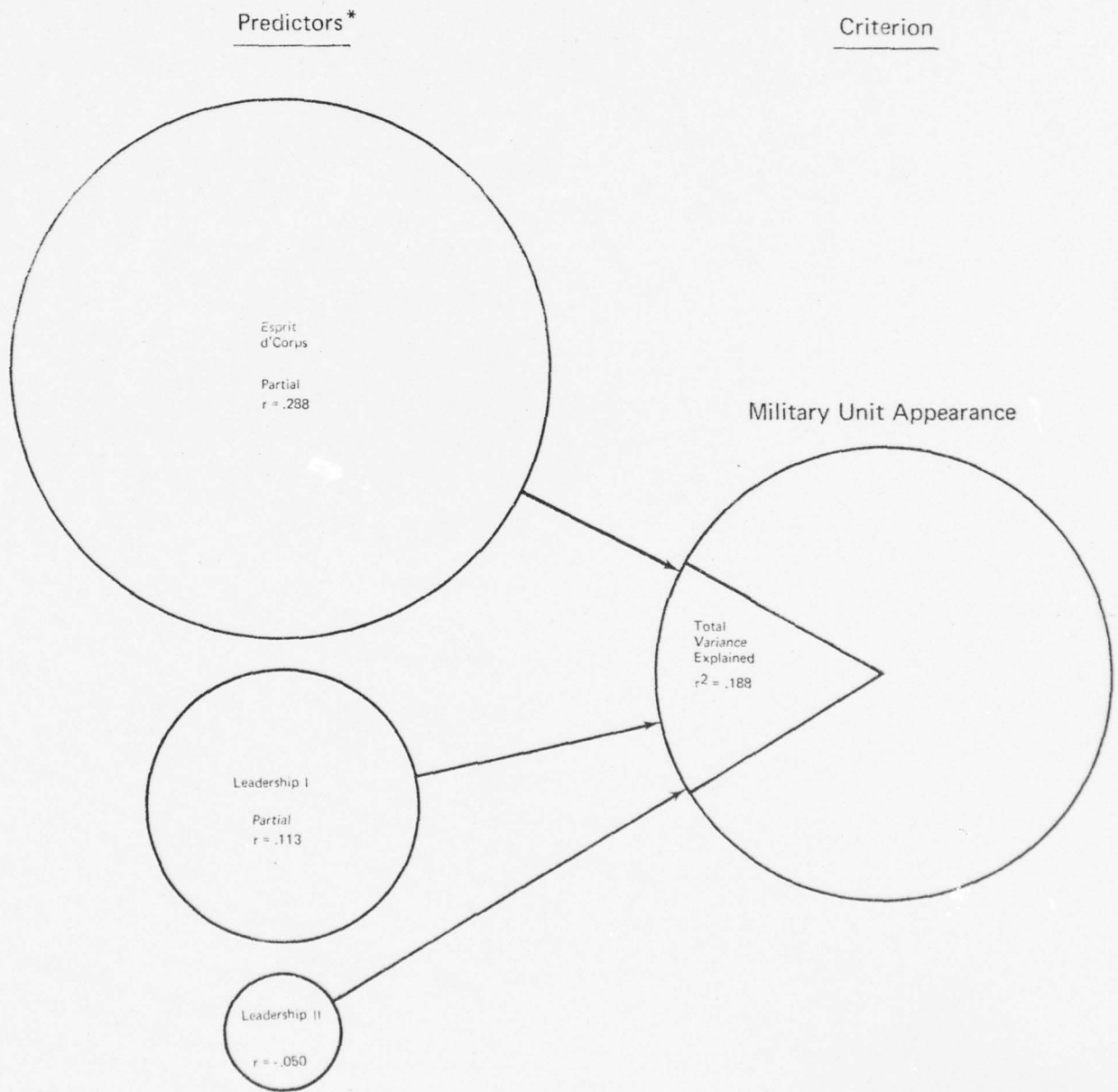
Figure 5 Principal Predictors of Army Unit Appearance
(Discipline II) for Combat and Support Units

Table 26
REGRESSION OF UNIT CONDUCT ON
SITUATIONAL PREDICTORS FOR COMBAT AND SUPPORT UNITS

Predictor Ranking	Variable	Partial Correlation	Unnormalized Regression Coefficient	Signi Leve
1	Esprit d'Corps	.292	.261 $\pm$ .028	.0
2	Unit Racial Discrimination	-.198	-.253 $\pm$ .041	.0
3	Military Work Role	.104	.105 $\pm$ .033	.0
4	General Racial Discrimination	.091	.056 $\pm$ .020	.0
5	Recreational Availability	-.056	-.061 $\pm$ .036	
6	Leadership II	.038	.040 $\pm$ .034	
7	Leadership I	.032	.035 $\pm$ 0.36	
8	Sexual Satisfaction	-.027	-.013 $\pm$ .016	
9	Financial Problems	-.024	-.014 $\pm$ .019	
10	Quality of Living Quarters	.006	.003 $\pm$ .017	
	Constant Term		1.680 $\pm$ .188	.0

N = 927

Overall Test of Regression: $F(10, 916) = 37.09$, $p < .0001$

Multiple Correlation: .537

Percentage of Variance Explained: 23.8

Standard Error or Residuals: .725

Table 27
REGRESSION OF UNIT CONDUCT ON
SITUATIONAL PREDICTORS FOR TRAINING UNITS

Predictor Ranking	Variable	Partial Correlation	Unnormalized Regression Coefficient	Significance Level
1	Esprit d'Corps	.345	.288± .068	.0001
2	Unit Racial Discrimination	-.204	-.261± .109	.05
3	Recreational Availability	.101	.093± .080	
4	Leadership II	.101	.094+ .081	
5	Sexual Satisfaction	-.031	-.014± .040	
6	Leadership I	-.029	-.029± .089	
7	General Racial Discrimination	.027	.017+ .054	
8	Financial Problems	.024	.013± .046	
9	Quality of Living Quarters	-.021	-.010+ .042	
10	Military Work Role	.010	.012± .098	
	Constant Term		1.782 ± .477	

$N = 142$

Overall Test of Regression: $F(10, 131) = 6.79$, $p < .0001$

Multiple Correlation: .584

Percentage of Variance Explained: 34.2

Standard Error or Residuals: .656

Predictors*   Criterion

Esprit
d'Corps

Partial
r = .289

Military Unit Conduct

Racial
Discrimination
in Unit

Partial
r = -.207

Total
Variance
Explained

$r^2 = .282$

Work
Role

Partial
r = .096

General
Racial
Discrimination

Partial
r = -.093

Leadership II

Partial
r = .079

*Size of circles is proportional to amount
of variance explained in the criterion.
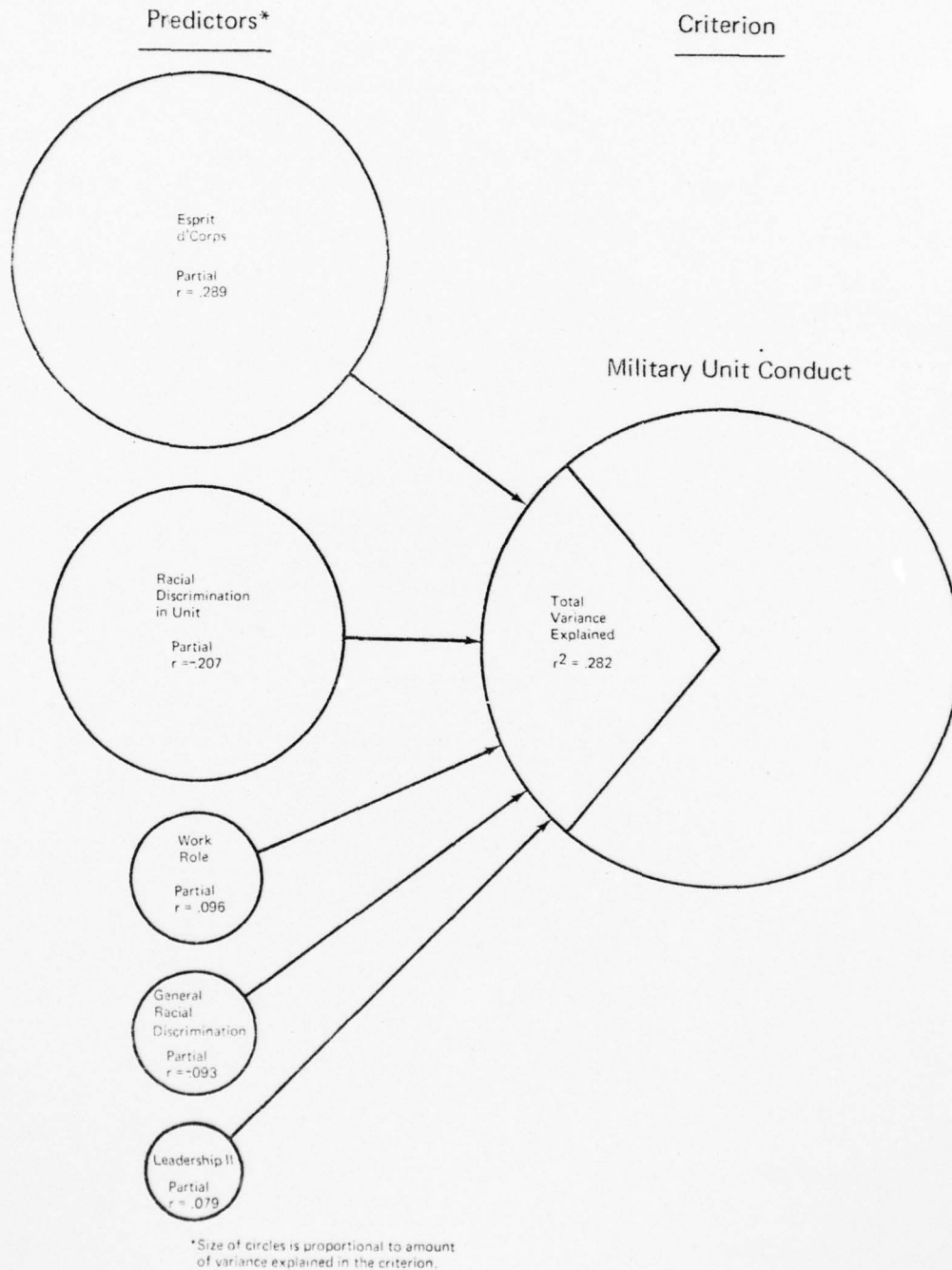
Figure 6   Principal Predictors of Army Unit Conduct
(Discipline III) for all Types of Units

DISCUSSION AND CONCLUSIONS

This final section of the report will review some of the major findings reported in terms of their implications for public policy and future research needs.

Policy Implications. — As noted in the Introduction of this report, there has been heretofore no empirical evidence that any general consensus exists among Army leaders as to what is meant by the term discipline. It follows that there have been no generally accepted indicators of discipline, other than the results of official acts such as arrests, courts-martial, confinement, less than honorable discharge and official awards and commendations. The limitations of using these official judgments as indicators of Army discipline have been pointed out in this report in a review of over three decades of research on military delinquency, and they are further confirmed by the evidence reported in Appendices C and D.

This situation has left Army leaders without the basic tools to begin to assess, and thereby manage, levels of discipline in their commands. The principal objectives of this inquiry were to ascertain whether a common Army conceptualization of discipline could be identified, operation-alized, and tested in a predictive model using demonstrably reliable socialpsycho-logical measures of discipline and its predictors. This has been done.

There are two levels at which discipline may be analyzed. One is at the individual level where the individual soldier is the unit of analysis. The other is the unit level at which discipline and its predictors are measured as they pertain to groups of soldiers. The primary focus of this inquiry has been on the unit level. This has been done to develop measures of unit discipline that may be coupled with Army survey feedback systems to provide Army leaders and researchers with not only ongoing information on the state of discipline, but more importantly, provide field commanders with diagnostic managerial tools that may be applied at the battalion or company level as a means of identifying current or potential discipline problems when these problems are still subject to corrective action and before they result in serious loss of unit effectiveness and lead to major delinquency problems.

There are two basic approaches that may be taken to the problem of conceptualizing and controlling discipline in a military organization. The first is to determine what personality and background variables predict disciplined behavior, and then develop appropriate measures and selection procedures to screen out the likely delinquent before he enters the service. This approach has been taken by many researchers, but it has failed to lead to the development of reliable selection devices that can be efficiently applied to screen out the military delinquent before he enters the service. There is still some promise in this approach, however, in that new measures may yet be devised to add to the predictive efficiency of the models used.

A second approach to the problem of conceptualizing and controlling military discipline is to determine what environmental phenomena have an impact on discipline, and then seek to correct environmental deficiencies that lead to poor discipline, and improve those elements of the environment that lead to disciplined behavior. The value of this approach is that it may lead to the development of a means to manage discipline after the initial selection process, for it is apparent that basic personality traits and social background characteristics, such as poor educational achievement, pre-service delinquency, and lower intelligence, will continue to plague the Army for the foreseeable future--especially under the all-volunteer Army program. It is encouraging to note that the results of this inquiry indicate that even if the Army must take less qualified personnel, it may be possible to improve significantly the performance of units containing these less qualified individuals by improving the social-psychological environments of these units.

In this inquiry, the researchers employed both of the above approaches, but by far the most fruitful was the latter wherein measures of unit performance, appearance, and conduct were used as discipline criteria. Environmental variables such as leadership, military work role, esprit d' corps, racial discrimination, quality of living quarters, and availability of recreational facilities were found to be useful predictors of these criteria. The secondary effort in this inquiry to develop a predictive model of specific military delinquencies, such as AWOL, proved to be far less fruitful and somewhat replicative of previous efforts to develop predictive models of military delinquent behavior (See Appendix C). Based on the findings gained using both approaches, it seems apparent that environmental phenomena have a great deal of promise as predictors of unit discipline, and as the basis for developing diagnostic tools that may be coupled with survey feedback systems to help Army leaders manage discipline.

These findings have important policy implications. First, the findings reported here make it quite apparent that military discipline, as the concept is understood in today's Army, can be reliably measured and to a great extent predicted by measures of environmental phenomena. It is important to note that these environmental circumstances are subject to development and change by the application of Army management programs and practices. It is beyond the scope of the current effort to specify steps that might be taken to affect the Army environment to improve Army discipline, but the avenues that might be profitably taken are obvious. The quality of leadership, for example, can be improved through training and selection, as well as through restrictions on personnel turbulence resulting from frequent reassignments. Satisfaction with military work roles can be raised by addressing the specific problem areas indicated in the items included in the Military Work Role scale developed for this inquiry. These include, for example, the development of more challenging task assignments (both in training and working situations), and the matching of MOS assignments to the individual's knowledge, interests and skills, particularly in support units where satisfaction with military work role is seen to be more important as a predictor of unit performance. Levels of esprit d'corps may be improved through development of interunit competition and exposure of soldiers as a unit to challenging team training programs to foster intraunit dependencies and trust. The availability of recreational facilities can be enhanced by providing not only a greater number of facilities, but also by giving greater priority to the average enlisted soldier on posts where facilities are scarce. The Army has undertaken serious efforts to improve the quality of living quarters, most recently in the USAREUR commands. Obviously, this too is an environmental variable that is subject to development and change through proper policymaking and resource allocation. The Army has also taken steps to combat racial discrimination in its ranks, and the evidence reported here indicate the priorities given this objective are not only appropriate from a humanitarian standpoint, but are likely to serve to enhance combat readiness and overall performance.

The steps that may be taken to affect environmental phenomenon with the intent of improving Army discipline are limited only by the imagination and resources of the Army leadership. This preliminary research effort points to several likely target areas where programs and actions can be taken to affect Army discipline, but more important, it provides a basis for developing an ongoing system for assessing and managing Army discipline.

The Need for Further Research. — There are, on the other hand, important limitations to the current inquiry. These limitations demonstrate the need for further research on the indicators and predictors of discipline. The first limitation is found in the nature of the survey design used in this inquiry. As an exploratory effort, the Army personnel to be surveyed for this research were drawn from a wide ranging sample of enlisted personnel assigned to several commands; it was not possible to survey commissioned officers. On the other hand, it is reasonable to presume that commissioned officers' orientations toward their immediate superiors, their satisfaction with their work role, and their satisfaction with other environmental phenomenon that have impact on their daily lives, may in turn affect the quality of leadership they provide, and hence, the level of discipline they maintain in their units. This point was made especially clear by a number of NCOs who, upon completing the survey questionnaire used in this inquiry, commented to the survey administrators that the problem with this survey effort, as with many survey inquiries made of Army personnel, is that the research is directed only toward the non-commissioned and enlisted ranks. The NCOs stated that as far as they were concerned, responsibility for problems with Army leadership, satisfaction with the military work role, and esprit d' corps rests to a large extent at the commissioned officer level, where, in their view, future surveys of this nature should also be made. Commissioned officers were not included in the survey sample for this inquiry because of the difficulties inherent in trying to administer a self-report instrument to a representative sample of the officer personnel assigned to a major post. But if the Army is to develop a truly comprehensive model of Army discipline, and from this model develop means to manage and control discipline, future researchers will have to be given access to officer personnel. Of particular interest are junior officers who have the greatest amount of daily interaction with NCO and enlisted personnel, and thereby have the greatest potential for influencing Army discipline through leadership.

Another limitation of the current inquiry, imposed by the necessity of limiting the scope of the survey sample, was the researchers' resultant inability to do extensive inquiries into specific types of Army units, such as elite combat units, units composed of women soldiers, units with especially high or low delinquency rates, or units with good and poor discipline as evidenced by the criteria developed for this inquiry. Evidence reported here strongly suggests, for example, that the predictive

model of discipline is quite different for combat and support units. There is need for further research using Army companies as units of analysis to test various models that may suggest different solutions to the problem of improving discipline in these types of units.

Another limitation in the current inquiry relates to the need to validate the findings by comparing the data derived from the measures of unit discipline, based on perceptions, with information describing observed behavior over time. For example, measures of military delinquency such as AWOL incidence, racial conflict, illicit drug use, alcoholism, as well as reenlistment rates, unit training proficiency scores, and other measures, may be used to determine the extent to which survey measures of unit performance, conduct, and appearance correlate with patterns of delinquent and non-delinquent behavior.

In summary, despite the exploratory nature of this inquiry, the evidence provided here suggests some steps Army leaders may take to control Army discipline and improve the quality of life of the American soldier. It seems apparent that the best approach to improving Army unit discipline and reducing military delinquency is to concentrate future efforts on improving the organizational and social environments in which the American soldier performs his day to day activities. Measures of military discipline must not be limited to indicators of delinquency or official judgments. The findings reported here suggest that the most useful measures of discipline are those based on patterns of behavior that support as well as oppose Army organizational goals. This report provides strong evidence that such measures can be coupled with survey feedback systems and used as badly needed and efficient managerial tools by Army leaders. It is therefore imperative that further research be conducted in the field to test the efficiency of these measures when used as diagnostic tools to help tactical unit leaders improve discipline in their commands.

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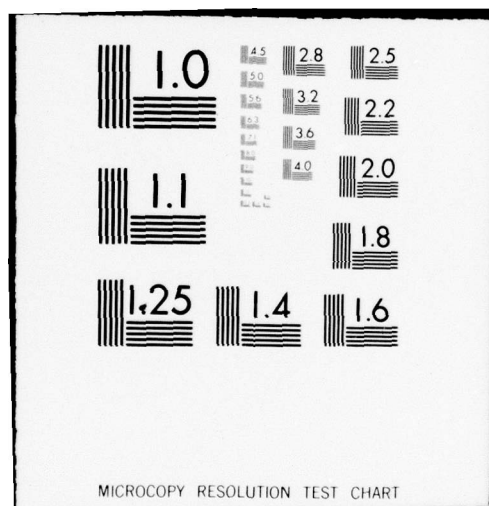
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APPENDIX A

DESCRIPTION OF SCALES AND INDICES

MILITARY UNIT PERFORMANCE SCALE: DISCIPLINE I

Variable. --This scale was designed to measure perceived levels of military unit discipline as indicated by patterns of behavior supportive of unit combat readiness, efficiency, teamwork, and productivity.

Description. --The measure consists of six items derived from the interviews of Army personnel performed for this research. The items were based on statements given in response to inquiries asking for indicators of discipline in an Army unit. The items contained in this measure were selected on the basis of their heavy loadings on the first[1] factor derived from a smallest space analysis of twenty-five items.

Scoring. --Item responses were scored from one to five with higher scores indicating greater perceived unit conformity with Army standards of good performance. Total scores for each respondent were computed by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. If a case yielded more than two missing data scores, the scale score was coded as missing data.

Reliability. --The coefficient alphas for the scale were .814 for the developmental sample and .817 for the replication sample, indicating moderately strong internal consistency.

Items. --The items included in the scale are listed below, along with the means and standard deviations for each item based on the un-transformed response scores.

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[1] For a more extensive description of the procedure used to develop the scales, see the Methods and Procedures section of this report.

Item No.	Item	Mean D Sample	Mean R Sample	Standard Deviation D Sample	Standard Deviation R Sample	N D Sample	N R Sample
III-6.	To what extent do members of your unit process paperwork in an efficient manner?	2.95	2.94	1.22	1.19	657	690
III-7.	To what extent do members of your unit cooperate with each other?	3.09	3.19	1.18	1.10	654	687
III-15.	To what extent do members of your unit work together as a team?	3.22	3.24	1.19	1.20	654	687
III-16.	To what extent do members of your unit maintain a high level of combat readiness?	3.24	3.25	1.28	1.24	659	690
III-17.	To what extent do members of your unit do what ever needs to be done?	3.22	3.23	1.15	1.14	666	691
III-23.	To what extent do members of your unit help each other out?	3.27	3.27	1.12	1.10	649	683

MILITARY UNIT APPEARANCE SCALE: DISCIPLINE II

Variable. --The scale is designed to measure the extent to which a member of a military unit perceives other members of the unit maintaining proper standards of cleanliness and dress.

Description. --This scale contains three items derived from the second factor in the smallest space analysis described above. All the items were derived from the interviews of Army personnel described in the Methods and Procedures section of this report, as well as from related readings. Both sources strongly suggest the use of appearance as an indicator of unit discipline. (See, for example, U.S. Department of the Army, Leadership Field Manual, 1965, p. 27).

Scoring. --Item responses were scored from one to five with the higher score indicating greater perceived unit conformity to Army standards of good appearance and cleanliness. Total scores for each respondent were computed by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. If a case yielded more than one missing score, the scale score was coded as missing data.

Reliability. --The coefficient alphas for the measure were .726 for the developmental sample and .704 for the replication sample, suggesting moderate to strong internal consistency given the few items contained in the scale.

Items. --The scale items are listed below, along with the means and standard deviations for each item for both the developmental and replication samples.

Item No.	Item	Mean D Sample	Mean R Sample	Standard Deviation D Sample	Standard Deviation R Sample	N D Sample	N R Sample
III-1.	To what extent do members of your unit maintain and properly wear their uniforms?	3.51	3.52	1.10	1.08	666	696
III-5.	To what extent do members of your unit keep living and working areas in clean and orderly condition?	3.48	3.53	1.23	1.17	663	695
III-18.	To what extent do members of your unit maintain a neat personal appearance?	3.44	3.46	1.01	1.03	663	695

MILITARY UNIT CONDUCT SCALE: DISCIPLINE III

Variable. --This scale attempts to measure the extent to which the respondent perceives members of his unit as displaying good conduct in terms of their interactions with their superiors, response to routine requirements, off-post conduct, productivity, quality of work, and ability or willingness to perform effectively with little or no supervision.

Description. --The scale contains seven items derived from responses of Army personnel interviewed for this project when asked for indicators of military discipline, as well as from related readings. (See, for example, U.S. Department of the Army, Leadership Field Manual, 1965, p. 27).

Scoring. --All the item responses were scored on a five-point scale with the higher score indicating better perceived unit conduct. Total scores for each respondent were computed by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. If a case yielded more than one missing score, the scale score was coded as missing data.

Reliability. --The coefficient alphas computed for the measure were .815 for the developmental sample and .802 for the replication sample, suggesting a high level of internal consistency.

Items. --The scale items are listed below, along with their means and standard deviations for both the developmental and replication samples.

Iten No.	Item	Mean D Sample	Mean R Sample	Standard Deviation D Sample	Standard Deviation R Sample	N D Sample*	N R Sample*
III-3.	To what extent do members of your unit "get over" on their supervisors?	3.08	3.09	1.30	1.30	659	684
III-4.	To what extent do members of your unit fail to show up on time?	3.48	3.56	1.19	1.19	652	691
III-10.	To what extent do members of your unit need direct supervision to get the job done right?	3.40	3.40	1.25	1.28	659	694
III-11.	To what extent do members of your unit display disorderly conduct off-post?	3.57	3.56	1.24	1.22	657	692
III-13.	To what extent do members of your unit sit around on duty hours doing nothing?	3.17	3.10	1.35	1.38	658	688
III-14.	To what extent do members of your unit do poor quality work?	3.61	3.60	1.20	1.20	656	687
III-24.	To what extent do members of your unit do just enough work to get by?	2.95	3.07	1.23	1.25	659	688

*Excluding stockade prisoners

LEADERSHIP SCALE I

Variable. --This scale is designed to measure the respondent's perception of the degree to which his or her supervisor exhibits positive aspects of leadership.[1] Leadership refers to "the behavior of an individual when he is directing the activities of a group toward a shared goal." The supervisor's behavior is assessed in terms of his perceived concern about the welfare of his subordinates, the degree to which he keeps them informed, encourages them to work together as a team, works right along with them, treats them as individuals, keeps himself informed about the progress they are making in their work, and communicates effectively with them. It also is designed to assess the supervisor's apparent technical competence, ability to plan ahead, ability to anticipate and solve problems before they get out of hand, willingness to make changes in ways of doing things, tendency to offer new ideas for solving job-related problems, and his ability to make decisions quickly and stick to them.

Description. --The scale consists of fourteen positively-worded Likert-type items selected through item and smallest space analyses described in the Methods and Procedure section of this report. Fifteen or the original Leadership pool items were developed specifically for this inquiry; eight were adapted from items contained in the Leadership Behavior Description Questionnaire (Fleishman, 1957, pp. 120-133);[2] and, one item was taken from the leadership measures developed by Bowers and Seashore (1966).[3] Smallest space analyses of the entire item pool revealed two basic dimensions underlying the respondent's perceptions of supervisory leadership. The first factor included items characterizing the supervisor as having traits commonly associated with good leadership ability. The Leadership I scale includes those items that loaded heavily on that first factor. The Leadership II scale described below is composed of items loading on the second factor.

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[1] The term "supervisor" is defined as the person to whom the soldier respondent reports directly within the chain of command.

[2] Authorization to use the items was received from Professor Ralph M. Stogdill, Ohio State University.

[3] Authorization to use the item was received from Dr. David G. Bowers, Institute of Social Research, University of Michigan.

Scoring. --Each item response was scored from one to five. The higher the score, the greater the extent to which the positive leadership trait was perceived by the respondent as being characteristic of his supervisor. The overall scale score for each respondent was calculated by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. If any case had more than six missing data scores, the case was coded as missing data.

Reliability. --The measure exhibited exceptionally high item inter-correlations and unidimensional scalar properties. Coefficient alphas for the scale were .923 for the developmental sample and .922 for the replication sample.

Items. --Items included in the final measure are listed below, along with the means and standard deviations of the response scores for both the developmental (D) and replication (R) samples. Items I-3, I-5, I-13, I-14, I-16, and I-21 were derived from the Leadership Behavior Description Questionnaire (Fleishman, 1957). Item I-18 was derived from the Bowers and Seashore leadership behavior measure (Bowers and Seashore, 1966).

Iten No.	Item	Mean D Sample	Mean R Sample	Standard Deviation D Sample	Standard Deviation R Sample	N D Sample	N R Sample
I-1.	To what extent is your supervisor concerned about the personal problems of his subordinates?	2.96	3.05	1.26	1.24	667	695
I-2.	To what extent is your supervisor technically competent to perform his duties?	3.61	3.69	1.09	1.12	665	694
I-3.	To what extent does your supervisor keep his subordinates informed?	3.25	3.35	1.14	1.18	650	685
I-4.	To what extent does your supervisor plan ahead?	3.23	3.19	1.17	1.17	646	680
I-5.	To what extent does your supervisor keep himself informed about the work that is being done by his subordinates?	3.40	3.44	1.19	1.20	663	693
I-7.	To what extent does your supervisor communicate effectively with his subordinates?	3.19	3.16	1.24	1.27	658	692
I-10.	To what extent does your supervisor anticipate and solve problems before they get out of hand?	2.95	3.07	1.30	1.30	661	690
I-12.	To what extent is your supervisor willing to make changes in ways of doing things?	2.74	2.88	1.36	1.35	661	691
I-13.	To what extent does your supervisor encourage subordinates to work together as a team?	3.54	3.66	1.35	1.27	661	687

Item No.	Item	Mean D Sample	Mean R Sample	Standard Deviation D Sample	Standard Deviation R Sample	N D Sample	N R Sample
I-14.	To what extent does your supervisor keep himself informed about the progress his subordinates are making in their work?	3.30	3.32	1.18	1.22	662	688
I-16.	To what extent does your supervisor work right along with his men?	2.80	2.87	1.47	1.42	666	694
I-18.	To what extent does your supervisor offer new ideas for solving job-related problems?	2.84	2.80	1.25	1.20	666	691
I-21.	To what extent does your supervisor know and treat his subordinates as individuals?	3.04	3.21	1.37	1.32	656	684
I-23.	To what extent does your supervisor make decisions quickly and stick to them?	3.26	3.22	1.27	1.26	658	689

LEADERSHIP SCALE II

Variable. --This scale is designed to measure the respondent's perception of the degree to which his or her supervisor displays behavioral traits considered by Army personnel as characteristic of poor leadership. More specifically, the scale measures perceptions regarding the degree to which the supervisor fails to provide for the everyday needs of his subordinates, fails to keep them busy with challenging tasks, seeks to avoid accepting responsibility for their mistakes, depends on coercion rather than rewards to motivate them, is not aware of their capabilities, fails to explain to them why a particular action is important, and simply lacks sufficient experience to properly perform his duties.

Description. --The scale consists of seven items that exhibited heavy loadings on the second factor found in a smallest space analysis (SSA-III) of the original leadership behavior item pool. The items were all constructed to measure conceptualizations of poor leadership behavior derived from the interviews of Army personnel conducted for this project.

Scoring. --Each item was scored from one to five. The higher the score, the greater the extent to which the item was perceived by the respondent as not being descriptive of his supervisor. The overall scale score for each respondent was the mean of the untransformed non-missing data response scores. Two missing data scores were allowed for each respondent. If any case had more than two missing data scores, the case was coded as missing data.

Reliability. --Coefficient alphas obtained for the measure were .698 for the developmental sample and .712 for the replication sample, indicating moderately strong internal consistency given the small number of items in the scale.

Items. --The items included in the final scale are listed below along with the means and standard deviations of the response scores for both the developmental and replication samples. Items I-11 and I-20 were discarded from both leadership scales due to weak factor loadings.

A-13

Item No.	Item	Mean D Sample	Mean R Sample	Standard Deviation D Sample	Standard Deviation R Sample	N D Sample	N R Sample
I-6.	To what extent does your supervisor lack sufficient experience to perform his duties?	3.74	3.75	1.21	1.19	662	685
I-8	To what extent does your supervisor fail to provide for the everyday needs of his subordinates?	3.62	3.67	1.18	1.18	660	693
I-9	To what extent does your supervisor fail to keep his subordinates busy with challenging tasks?	3.50	3.46	1.31	1.33	655	688
I-15.	To what extent is your supervisor unwilling to accept responsibility for mistakes made by his subordinates?	3.54	3.51	1.33	1.31	663	689
I-17.	To what extent does your supervisor depend too much on threats - rather than rewards - to get things done?	3.21	3.30	1.52	1.49	667	692
I-19.	To what extent does your supervisor fail to explain why a particular action is important?	3.50	3.44	1.29	1.30	659	678
I-22.	To what extent is your supervisor not aware of his subordinates' capabilities?	3.34	3.36	1.30	1.36	655	686

MILITARY WORK ROLE SCALE

Variable.--This scale is designed to measure the respondent's orientation toward his military work role in terms of level of expressed satisfaction with unit policies, working conditions, co-workers, the relevance and adequacy of training received, importance of the unit mission, importance of job assigned, job interest, relevance of assigned Military Occupational Specialty (MOS) to respondent's knowledge, interests, and skills, sense of accomplishment from day-to-day work activities, current satisfaction with an Army career, and intentions to pursue an Army career.

Description.--The original scale item pool contained fifteen items, two of which were eliminated (II-10, II-11) due to low intercorrelations with other item scores. The remaining items, as evidenced by the interitem correlation matrix for the pool of the developmental sample data, were found to fall on a single dimension. All of the items but one were constructed especially for the scale to measure facets of the military work role that were perceived by Army personnel interviewed for this project as having a substantial impact on Army discipline. The items all follow the Likert format with five response choices, with the exception of item II-15 which has four possible response choices.

Item II-13 is taken from the Survey of Organizations questionnaire (Taylor and Bowers, 1972). Items II-15 and II-16 are based on items originally reported in Merton, Reader, and Kendall (1957), and adapted for use on a military sample by Bauer (1973).

Scoring.--Items with reversed scores are marked with an asterisk (*) in the listing below. Responses for all items but II-15 were scored from one to five with the higher scores assigned to responses indicating a more positive orientation toward the work role. Item II-15 was scored from one to four in the same manner. The total scale score for each respondent was computed by dividing the sum of the untransformed non-missing data item scores with the number of non-missing data items scores. If any case had more than six missing data scores, the scale score was not computed and the case was coded as missing data.

Reliability.--The internal consistency of the scale is apparently exceptionally high. Coefficient alpha was .908 for the developmental

sample and .900 for the replication sample.

Items. --The final scale items are listed below along with their means and standard deviations for both samples.

Item No.	Item	Mean D Sample	Mean R Sample	Standard Deviation D Sample	Standard Deviation R Sample	N D Sample	N R Sample
II-1.	To what extent do you enjoy performing the actual day-to-day activities that make up your job?	2.83	2.92	1.43	1.39	667	692
II-2.	To what extent are there things about working here (people, policies, conditions) that encourage you to work hard?	2.50	2.61	1.35	1.35	665	688
II-3.	To what extent do you gain a sense of accomplishment from the day-to-day activites that make up your job?	2.76	2.71	1.41	1.38	665	692
II-4.	To what extent do you feel the training you have received has improved your ability to perform your job?	3.10	3.26	1.47	1.46	666	696
II-5.	To what extent do you feel that the people you work with are a team that works together?	3.00	3.12	1.39	1.35	659	693
II-6.	To what extent does your MOS (Military Occupational Specialty) match your interests, knowledge, and skills?	2.79	2.98	1.54	1.54	664	689
II-7.	In your opinion, how important is the mission assigned to this command? ___ [1] Not important at all ___ [2] Somewhat important ___ [3] Fairly important ___ [4] Moderately important ___ [5] Very important	3.49	3.70	1.47	1.45	660	695

Item No.	Item	Mean D Sample	Mean R Sample	Standard Deviation D Sample	Standard Deviation R Sample	N D Sample	N R Sample
II-8.	How important is the job you are doing in the Army? __ [1] Not important at all __ [2] Somewhat important __ [3] Fairly important __ [4] Moderately important __ [5] Very important	3.50	3.71	1.50	1.45	662	697
II-9.	How interested are you in the job you are doing in the Army? __ [1] Very uninterested __ [2] Somewhat uninterested __ [3] Neither interested or uninterested __ [4] Fairly interested __ [5] Very interested	3.31	3.44	1.56	1.53	663	697
II-12.	How often are you assigned meaningless tasks? __ [1] Daily __ [2] Once or twice a week __ [3] Once or twice a month __ [4] Seldom __ [5] Never	2.40	2.61	1.40	1.44	664	694
II-13.	All in all, how satisfied are you with your job? __ [1] Very dissatisfied __ [2] Somewhat dissatisfied __ [3] Neither satisfied or dissatisfied __ [4] Fairly satisfied __ [5] Very satisfied	3.00	3.13	1.49	1.48	663	697
VIII-15.	Which of the following statements best describes your feelings about a career in the Army? __ [1] It is the only career that could really satisfy me __ [2] It is one of several careers which I could find almost equally satisfying __ [3] It is one of the least satisfying careers I can think of, everything considered __ [4] I have not considered how satisfying a military career could be	2.28	2.32	0.96	0.99	657	686

Item No.	Item	Mean		Standard Deviation		N	
		D Sample	R Sample	D Sample	R Sample	D Sample	R Sample
VIII-16.*	Do you think you will pursue a career in the Army? ___ [1] Yes, definitely ___ [2] Yes, probably ___ [3] I am still undecided ___ [4] No, probably not ___ [5] No, definitely not	2.59	2.73	1.46	1.53	665	689

ESPRIT D'CORPS SCALE

Variable. --This scale attempts to measure the soldier's attitude toward others in his unit in terms of his perceptions of their professional competence, cooperativeness, trustworthiness, and general likeability. When respondent scores on this measure are collected by unit, the summary score constitutes a measure of unit esprit.

Description. --The original item pool consisted of seven Likert-type items, three of which were previously used in a measure of "group esprit and solidarity" (Spector, Clark, and Glickman, 1960, p. 309). Two of the original pool items were deleted because of their low inter-correlation scores.

Scoring. --Items with reversed scores are marked with an asterisk (*) below. Responses were scored from one to six with the higher scores being assigned to sentiments suggesting high esprit. The total scale score for each respondent was computed by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. If any case had more than two scores missing, it was coded as missing data.

Reliability. --Coefficient alphas of .766 for the developmental sample and .731 for the replication sample suggest moderate to strong internal consistency given the small number of items included in the measure.

Items. --Items included in the final scale are listed below along with their means and standard deviations for both samples. Items IV-10, IV-13, and IV-23 are adapted from those reported by Spector, Clark, and Glickman (1960, p. 309).

Item No.	Item	Mean D Sample	Mean R Sample	Standard Deviation D Sample	Standard Deviation R Sample	N D Sample	N R Sample [**]
IV-10.	Men in my unit know how to get the job done right.	4.27	4.39	1.45	1.45	750	687
IV-13.	In my unit, if a man needs help he can count on others to provide it.	3.78	3.89	1.62	1.67	748	688
IV-23.	Members of my unit are a good bunch to work with.	4.30	4.35	1.48	1.52	747	682
IV-34. *	I don't care very much for the guys I work with.	4.49	4.50	1.58	1.59	744	679
IV-35. *	I don't trust the others in my unit.	4.09	4.14	1.66	1.72	718	665

** Excluding stockade prisoners

UNIT RACIAL DISCRIMINATION SCALE

Variable. --This scale is designed to measure the respondent's perceptions of the degree of racial discrimination practiced in his Army unit. It attempts to measure perceptions of racial discrimination and prejudice directed toward both whites and non-whites.

Description. --The scale was derived from the results of smallest space analyses of twenty Likert-type items. All of the items fell on a single dimension. The first item included in this scale (IV-4) was adapted from the Racial Generalizations composite reported by Stoloff, et al. (1972, p. C-1); another (IV-26) from the perceived discrimination composite reported by the same authors (Ibid., p. C-3). Both items have been successfully used to measure racial perceptions of Army, Navy, and Marine Corps personnel. The two remaining items (III-8 and III-21) were developed for this research project to measure unit discrimination. Items VI-12, IV-14 and IV-38 were deleted from the scale due to low reliability and failure to load on the "unit discrimination" factor.

Scoring. --The responses for items IV-4 and IV-26 were scored from one to six with the higher scores assigned to responses indicating high levels of perceived racial discrimination and prejudice. Items III-8 and III-21, on the other hand, were scored from one to five; again, the higher scores were assigned to responses indicating racial discrimination. The total scale score for each respondent was calculated by first transforming the item scores to standard scores, then dividing the sum of the non-missing data scores. If a case yielded more than one missing data score, the total scale score was not computed and the case was assigned a missing data score for the unit discrimination variable.

Reliability. --Coefficient alphas calculated for the scale suggest the scale is sufficiently reliable to warrant its use in this exploratory research effort, but also suggest the scale may not be sufficiently reliable to be used as a diagnostic management instrument in an Army setting.

A comparison of the coefficient alphas between racial groups of respondents indicates the scale is most reliable among black respondents, and is least reliable among respondents other than blacks or whites (Table A-1). Possible reasons for, and implications of, this finding are discussed in the Results section of this report.

Table A-1

COEFFICIENT ALPHAS FOR UNIT RACIAL DISCRIMINATION
BY RACE FOR DEVELOPMENTAL AND REPLICATION SAMPLES

Race	D Sample	R Sample
Black	.650	.642
White	.574	.634
Other	.507	.542

Item. --The final scale items are listed below along with the means and standard deviations for the item scores for both the developmental and replication samples.

Item No.	Item	Means D Sample	Means R Sample	Standard Deviation D Sample	Standard Deviation R Sample	N D Sample*	N R Sample*
IV-4.	Whites in my unit have a good reason to distrust non-whites .	2.74	2.78	1.89	1.95	643	684
III-8.	To what extent do members of your unit let racial conflicts interfere with their work?	3.71	3.75	1.30	1.31	654	691
III-21.	To what extent do members of your unit display racial prejudice?	3.52	3.65	1.31	1.34	659	691
IV-26.	Non-whites in my unit have good reason to distrust whites.	2.38	2.67	1.63	1.93	642	678

* Excluding stockade prisoners

GENERAL RACIAL DISCRIMINATION SCALE

Variable. --The scale attempts to measure the respondent's perceptions regarding the degree of racial discriminatory practices evidenced in the Army in general, as well as in the local off-post civilian community. The scale primarily measures perceptions of racial discrimination against non-whites.

Description. --The scale was derived from a smallest space analysis of twenty items. Sixteen of the items were originally used to measure perceived racial discrimination among U.S. Navy and Marine Corps personnel (Stoloff, et al., 1972, Appendix C). Stoloff, et al. reported the "perceived discrimination" item composite from which the items were derived yielded a coefficient alpha of .90, thereby exhibiting a "highly acceptable" level of internal consistency. They also reported that the item composite exhibited the same factorial characteristics and response distributions among Army personnel as it did among a comparable group of Naval personnel. Four other items included in the original item pool were developed for this project to tap perceived levels of off-post racial discrimination against non-white soldiers. Two items related to racial generalizations (IV-24 and IV-38) were not included in the final scale due to low reliability.

All of the items included in the final general racial discrimination scale fell on a single factor resulting from a smallest space analysis of the item scores using the scale construction procedures described in the Methods and Procedures section of this report. The final scale contains five items (IV-11, IV-16, IV-21, IV-32, IV-36) adapted from the perceived discrimination composite reported by Stoloff, et al. (Ibid.). Two others included in the final scale (IV-40 and IV-41) were among those developed for this project to tap perceived levels of off-post racial discrimination against non-white soldiers.

Scoring. --The item responses were scored from one to six with the higher scores being assigned to responses indicating higher levels of perceived racial discrimination in the Army and in the immediate off-post environment. Total scale scores for each respondent were calculated by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. If a case yielded more than two missing data scores, the total scale score was not computed and the case was assigned a missing data score for the general discrimination variable.

Reliability.--Preliminary item analyses of the response data revealed there would probably be substantial variation in the reliability of the scale between different racial groups. Subsequent calculation of coefficient alphas on the final scale items confirmed this. It is apparent that the reliability of perceptions of general racial discriminatory practices against non-whites does vary somewhat between racial groups, although there is no consistent pattern (Table A-2). In any case, the coefficient alphas indicate the scales have an acceptable level of reliability for purposes of exploratory research, such as this effort, but the scale should be used with extreme caution as a diagnostic management tool unless greater reliability can be attained.

Table A-2

COEFFICIENT ALPHAS FOR GENERAL RACIAL
DISCRIMINATION SCALE BY RACE FOR
DEVELOPMENTAL AND REPLICATION SAMPLES

Race	Developmental Sample	Replication Sample
Black	.730	.633
White	.684	.701
Other	.795	.585

Items.--The final scale items are listed below along with the means and standard deviations of the item scores derived from the developmental and replication samples.

Item No.	Item	Racial Group *	Means		Standard Deviation		N	
			D Sample	R Sample	D Sample	R Sample	D Sample	R Sample
IV-11.	The Army should make a greater effort to assist non-whites to qualify for enlistment and technical ratings.		3.67	3.93	1.81	1.93	639	684
IV-16.	Members of minority groups have a harder time in the Army than others.		3.16	3.48	1.80	1.96	651	688
IV-21.	White soldiers are punished less severely than non-whites for the same offenses.		2.42	2.85	1.83	2.20	645	687
IV-32.	The Army should recognize that it is not always fair to apply test standards to minority groups that have been developed for whites.		3.53	3.75	1.81	2.01	626	677
IV-36.	Commanding officers should be more responsive to the needs of minority group members.		3.43	3.77	1.79	1.83	641	679
IV-40.	There is so much discrimination against minority soldiers by local civilians, minority soldiers don't want to leave the post.		2.59	3.03	1.66	2.00	638	687
IV-41.	Local landlords discriminate against non-whites.		3.01	3.77	1.70	2.29	563	674

* Excluding stockade prisoners

ACCEPTANCE OF AUTHORITY SCALE

Variable. --This scale was designed to measure the extent to which the respondent holds a submissive, uncritical attitude toward idealized, moral authority in the Army, as well as in society in general.

Description. --The scale consists of six Likert-type items selected and, where necessary, adapted from items contained in the original, as well as in subsequent variations of the California F scale. All of the items employed in the final scale were based on items reported by Berkowitz and Wolkon (1964) in their effort to develop an anthoritarianism measure that avoids problems of acquiescent response set and multi-dimensionality. (Also see Robinson and Shaver, 1969, pp. 245-253). Three of the final items (IV-17, IV-28, IV-21) were especially attractive because they were found by Bales and Couch (1969), in a factor analysis of basic value items, to fall on a single "acceptance of authority" dimension. (Also see, Robinson and Shaver, 1969, pp. 444-448).

Scoring. --The single reverse-scored item is marked with an asterisk (*) below. Response scores ranged from one to six with the higher scores being assigned to responses indicating greater acceptance of authority. Total scores for each respondent were computed by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. If a case yielded more than two missing data scores, the respondent's scale score was not computed and the case was coded as missing data.

Reliability. --The scale yielded coefficient alphas of .764 for the developmental sample and .727 for the replication sample, suggesting a moderately high level of internal consistency.

Items. --The items included in the final scale are listed below, along with their means and standard deviations for both samples.

Item No.	Item	Mean		Standard Deviation		N	
		D Sample	R Sample	D Sample	R Sample	D Sample	R Sample
IV-8.	Because of the rebellious ideas of youth, there are more problems in the world.	3.08	3.31	1.87	1.96	658	689
IV-15. *	In the long run, it is better for our country if young people are allowed a great deal of personal freedom and aren't strictly disciplined.	3.43	3.42	1.79	1.92	652	690
IV-17.	What youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country.	3.67	3.77	1.82	1.86	655	692
IV-18.	Strict Army discipline has a good influence on most young men .	3.48	3.60	1.84	1.88	661	692
IV-28.	Obedience and respect for authority are the most important virtues children should learn.	4.42	4.53	1.60	1.62	655	683
IV-31.	Young people sometimes get rebellious ideas, but as they grow up, they ought to get over them and settle down.	4.00	4.13	1.62	1.62	647	682

STATUS CONCERN SCALE

Variable. -- This scale attempts to measure the value the respondent places on the achievement of higher status and the maintenance of a conforming image within the Army, as well as in society in general. It was reported by the Army personnel interviewed for the project that a soldier's level of discipline varys with his concern with status and desire for promotion and achievement.

Description. -- The original item pool consisted of seven Likert-type items, six of which were adapted or taken from the Kaufman status concern scale (Robinson and Shaver, 1969, pp. 301-303; Kaufman, 1957). Two of the items (IV-2, IV-25) were deleted due to low reliability.

Scoring, -- There are no reverse-scored items. Responses were scored from one to five with the larger scores indicating higher status concern. The overall scale score for each respondent was computed by dividing the sum of the non-missing data scores by the number of non-missing data items. If any case had more than two missing data items, the case was scored as missing data.

Reliability. -- The measure met the minimum criteria for being considered unidimensional. Coefficient alphas derived for the measure were .566 for the developmental sample and .598 for the replication sample.

Items. -- Items included in the final measure are listed below, along with their means and standard deviations, for both the developmental (D) and replication (R) samples.

Item No.	Item*	Mean		Standard Deviation		N	
		D Sample	R Sample	D Sample	R Sample	D Sample	R Sample*
IV-6.	One of the things you should consider in choosing your friends in the Army is whether they may help your chances for promotion.	2.42	2.41	1.71	1.73	751	693
IV-9.	One should avoid doing things in public which appear wrong to others, even though one knows that these things are right.	3.06	3.14	1.86	1.93	753	688
IV-22.	It is worth considerable effort to assure one's self of a good name with the right kind of people.	4.14	4.40	1.69	1.63	741	685
IV-30.	The raising of one's social position is one of the more important goals in life.	3.79	3.97	1.67	1.70	734	682

*Excluding stockade prisoners.

SOCIAL RESPONSIBILITY SCALE

Variable. --This scale attempts to measure the level of value the respondent places on elements of social responsibility, i.e., an orientation toward helping others and doing a good job, even when there is nothing to be gained from others for having done so.

Description. --The four items included in the original item pool are drawn from a social responsibility scale reported by Berkowitz and Lutterman (1968; also Robinson and Shaver, 1969, pp. 383-385) and originally drawn from a social responsibility scale derived by Harris (1957). The items were given in Likert scale format with six response options ranging from "Strongly Agree" to "Strongly Disagree." All three items are worded to reflect socially responsible behavior, thus the higher scores indicate greater apparent social responsibility. One item (IV-39) was deleted from the scale because of its apparent low reliability as indicated by its intercorrelations with the other items.

Scoring. --Response scores ranged from one to six with the higher scores being assigned to the agreement responses. Total scores for each respondent were computed by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. If a case yielded more than one missing data score, the respondent's scale score was not computed and the case was coded as missing data.

Reliability. --The internal consistency of the scale is moderate but acceptable given the small number of items in the scale. Coefficient alphas derived from the developmental and replication samples were .615 and .558, respectively.

Items. --The items included in the final scale are listed below, along with their means and standard deviations for both samples.

Item No.	Item	Mean		Standard Deviation		N	
		D Sample	R Sample	D Sample	R Sample	D Sample	R Sample*
IV-1.	Every person should give some of his time for the good of his town or country.	4.74	4.76	1.49	1.49	7.45	690
IV-7.	It is the duty of each person to do his job the very best he can.	5.14	5.20	1.33	1.29	753	691
IV-20.	I feel very bad when I have failed to finish a job I promised I would do.	4.77	4.81	1.55	1.50	751	688

* Excluding stockard prisoners

FAMILY RELATIONS SCALE

Variable.--This scale is designed to measure the respondents' subjective perceptions of the quality of family relations that prevailed in his or her home while he or she was growing up. The scale incorporates several facets of family relations, including family cohesiveness (closeness), parental punitiveness, and level of family responsibilities assigned to the respondent.

Description.--The scale is composed of 21 Likert-type items having a variety of closed-response categories. Nine of these are negatively-worded items (VII-22b to VII-22j) and designed to measure levels of perceived parental punitiveness. These items were taken from the parental punitiveness measure reported by Bachman (1970, p. 21) and used as a part of a family relations measure in the Youth in Transition study of sophomore high school boys in the United States. Item 22a was deleted because of its low intercorrelations with other parental punitiveness items. Items VII-23 to VII-28 were taken from the Youth in Transition study (Ibid, pp. 19-20) and incorporated with items VII-29a, VII-29f, VII-29j, VII-29n, VII-29q, and VII-29r as measures of family cohesiveness.

The latter six items were used previously to measure perceptions of family cohesiveness among U.S. Army Personnel Control Facility inmates, (Littlepage and Fox, 1972, p. 57). Items VII-29c, VII-29h, and VII-29t were obtained from the same source (Ibid.) and were used to measure a lack of responsibilities at home. All the items were incorporated in the scale because the underlying constructs of family cohesiveness, punitiveness, and responsibilities were perceived as major determinants of military discipline by the Army personnel interviewed for this project.

Preliminary analyses suggest the scale may yield multiple dimensions, but the direction and levels of the intercorrelation coefficients exhibited by the items indicate sufficient unidimensionality to warrant using the items in a single measure of family relations. It should be noted that the parental punitiveness and family cohesiveness items taken from the Youth in Transition study were used as a single measure in that report.

Scoring.--The items were scored so that responses indicating greater family cohesiveness, lack of parental punitiveness, and greater family responsibilities were given the higher scores. All responses were then transformed to standard (Z) scores. Total scale scores for each respondent were computed by dividing the sum of the transformed non-missing data scores by the number of transformed non-missing data scores. If any case had more than ten missing data scores, the total scale score was not computed and the case was coded as missing data.

Reliability.--The scale yielded coefficient alphas of .898 for the developmental sample and .890 for the replication sample.

Items.--The twenty-one items included in the final scale are listed below, along with the means and standard deviations of the untransformed scores for both the developmental and replication samples.

FAMILY COHESIVENESS ITEMS

Item No.	Item	Mean D Sample	Mean R Sample	SD D Sample	SD R Sample	N D Sample	N R Sample*
VII-23.	When you were growing up, how did you fell about how much affection you got from your father (or male guardian)? - [1] Wanted and got enough affection -[2] Wanted slightly more than I received -[3] Wanted more than I received -[4] Did not want affection from him	2.05	2.02	1.16	1.20	732	679
VII-24.	When you were growing up, how did you feel about how much affection you got from your mother (or female guardian)? -[1] Wanted and got enough affection -[2] Wanted slightly more than I received -[3] Wanted more than I received -[4] Did not want affection from her	2.55	2.53	0.85	0.95	745	687
VII-25.	When you were growing up, how close did you feel to four father (or male guardian)? -[1] Extremely close -[2] Quite close -[3] Fairly close -[4] Not very close	2.60	2.57	1.20	1.19	737	689

*Excluding Stockard Prisoners

FAMILY COHESIVENESS ITEMS

Item No.	Item	Mean D Sample	Mean R Sample	SD D Sample	SD R Sample	N D Sample	N R Sample *
VII-26.	How close did you feel to your mother (or female guardian) at that time? -[1] Extremely close -[2] Quite close -[3] Fairly close -[4] Not very close	3.22	3.17	0.93	0.98	747	693
VII-27.	When you were growing up, how much did you want to be the kind of person your father (or male guardian) is when you became an adult? -[1] Very much -[2] Somehwhat -[3] A little -[3] Not very much -[4] Not at all	3.24	3.34	1.54	1.50	742	691
VII-28.	How much did you want to be like the kind of person your mother (or female guardian) is? -[1] Very much -[2] Somewhat -[3] A little -[4] Not very much -[5] Not at all	3.14	3.16	1.44	1.42	743	685

PARENTAL PUNITIVENESS ITEMS

Item No.	Item	Mean D Sample	Mean R Sample	SD D Sample	SD R Sample	N D Sample	N R Sample *
VII-22(b)	Act as if they didn't care about you anymore.	4.38	4.38	0.98	0.96	738	691
VII-22(c)	Disagree with each other about how to raise you.	3.91	3.95	1.15	1.13	737	682
VII-22(d)	Actually slap you.	3.36	3.44	1.14	1.15	735	683

*Excluding Stockard Prisoners

PARENTAL PUNITIVENESS ITEMS

Item No.	Item	Mean D Sample	Mean R Sample	SD D Sample	SD R Sample	N D Sample	N R Sample *
VII-22(e)	Take away your privileges (TV, dates, car, movies, etc.)	3.39	3.45	1.10	1.06	738	684
VII-22(f)	Blame you or criticize you when you didn't deserve it.	3.84	3.85	1.07	1.08	742	691
VII-22(g)	Threaten to slap you.	3.45	3.45	1.20	1.19	739	689
VII-22(h)	Yell, shout or scream at you.	3.07	3.06	1.12	1.14	741	688
VII-22(i)	Disagree about punishing you.	3.84	3.87	1.12	1.09	736	684
VII-22(j)	Nag at you.	3.42	3.41	1.23	1.27	729	678

FAMILY CLOSENESS ITEMS

Item No.	Item	Mean D Sample	Mean R Sample	SD D Sample	SD R Sample	N D Sample	N R Sample *
VII-29(a)	My family was happy together.	3.35	3.28	.942	.974	638	671
VII-29(f)	My family did things together.	3.12	3.06	.964	.974	641	681
VII-29(j)	My parents were concerned about my welfare.	3.56	3.56	.814	.801	644	674
VII-29(n)	I felt I could talk to my father (or male guardian)	2.96	2.94	1.12	1.09	613	659
VII-29(q)	I felt I could talk to my mother (or female guardian)	3.33	3.32	.945	.913	642	682
VII-29(r)	My parents (or legal guardians) were happy together.	3.20	3.19	1.05	1.04	616	656

* Excluding Stockard Prisoners

FAMILY RESPONSIBILITY ITEMS

Item No.	Item	Mean		SD		N	
		D Sample	R Sample	D Sample	R Sample	D Sample	R Sample*
VII-29(c)	My parents depended on me.	2.44	2.31	1.11	1.17	620	637
VII-29(h)	I had to take care of my brothers and sisters.	2.03	1.99	1.10	1.10	606	640
VII-29(t)	I often had to help my family.	2.50	2.46	1.12	1.15	635	662

* Excluding Stockade Prisoners

JOB RELATIONS SCALE

Variable. --This scale is designed to measure the extent to which the respondent has had positive experiences in the civilian work environment as evidenced by ease of adjustment to routine job requirements and enjoyment of good relations with one's fellow workers.

Description. --The scale is composed of six items, five of which (VII-29g, VII-29k, VII-29m, VII-29p, VII-29s) are adapted from items which were found to load on a "work success" factor in a factor analysis of civilian background characteristics of Army personnel confinement facility inmates (Littlepage and Fox, 1972, p. 57). The sixth item (VII-29d) was constructed specifically for this scale. A seventh item (VII-29u), taken verbatim from the previously mentioned "work success" item list, was deleted from the final scale because of its low intercorrelations with the other items.

Scoring. --The item responses were scored from one to four with the higher scores assigned to responses indicating a favorable adjustment to work situations and positive relations in the work environment. Total scale scores for each respondent were computed by dividing the sum of the untransformed non-missing data scores by the number of non-missing data scores. If any case had more than two missing data scores, the total scale score was not computed and the case was coded as missing data.

Reliability. --The scale yielded alpha coefficients of .842 for the developmental sample and .852 for the replication sample, suggesting a high level of internal consistency.

Items. --The final scale items are listed below along with the means and standard deviations of the untransformed item scores for both the developmental and replication samples.

Item No.	Item	Mean D Sample	Mean R Sample	Standard Deviation D Sample	Standard Deviation R Sample	N D Sample*	N R Sample*
VII-29d	Holding a steady job was difficult for me	3.29	3.26	1.01	1.02	527	621
VII-29g	Jobs I held were boring	2.70	2.71	1.04	1.05	616	637
VII-29k	I frequently lost jobs because I arrived for work late	3.58	3.59	0.88	0.86	603	619
VII-29m	I would usually take a job and quit after a few days or weeks	3.55	3.58	0.86	0.82	605	626
VII-29p	I had difficulty getting along with people I worked with	3.49	3.47	0.80	0.83	631	658
VII-29s	I often changed from job to job	3.24	3.24	1.00	1.00	600	632

* Excluding stockard prisoners

SCHOOL RELATIONS SCALE

Variable. --This scale is designed to measure the perceived quality of relations the respondent had within the school environment while he or she was growing up.

Description. --The scale consists of six items drawn from a uni-dimensional "School Problems" measure used in a survey of Armed Personnel Control Facility inmates by Littlepage and Fox (1972, p. 57). The wording of VI-291 was changed slightly from the Littlepage-Fox version.

Scoring. --The item response scores ranged from one to four with the higher scores being assigned to responses suggesting harmonious relations in the school environment. Scoring for the negatively-worded items was, of course, reversed. A respondent's total scale score was computed by dividing the sum of untransformed non-missing data scores by the number of untransformed non-missing data scores. If a case yielded more than two missing scores, a total score was not computed and the case was scored as missing data.

Reliability. --Alpha coefficients computed for the scale using the developmental and replication sample were .723 and .699, respectively, suggesting moderate internal consistency.

Items. --The items included in the final scale are listed below, along with their means and standard deviations for both samples.

Item No.	Item	Mean D Sample	Mean R Sample	Standard Deviation D Sample	Standard Deviation R Sample	N D Sample	N R Sample *
VII-29b	I did not like school	2.60	2.56	1.11	1.10	647	677
VII-29e	I had difficulty with school work	2.75	2.75	1.03	1.04	646	689
VII-29i	I enjoyed school	2.79	2.79	1.06	1.06	645	679
VII-29l	My parents (or guardian) were not happy with the grades I received in school	2.54	2.52	1.06	1.06	649	680
VII-29o	My teachers did not care for me	3.10	3.12	.91	.91	631	663

* Excluding stockard prisoners

SOCIOECONOMIC STATUS INDEX

Variable. --This index is designed to measure the respondent's parental socioeconomic status while the respondent was growing up based on several criteria, including parental educational achievement, material possessions in the home, and size of the home. The measure is intended to be more than a composite measure of educational achievement and material wealth, however, for it is assumed that these factors "... are all determinants of whether a home is a rich environment for learning, an environment in which education and achievement are likely to be encouraged, [and that] ... some of these same factors reflect parental abilities and aptitudes (e. g., intelligence), and are thus likely to be related to the genetic [and cultural] endowment of children" (Bachman, 1970, p. 10). Thus, the index is intended to provide a summary measure of the quality of the home environment within which the respondent grew up.

Description. --The measure is derived from the socioeconomic level index developed for use in the Youth in Transition study of American high school students (Bachman, ibid., pp. 10-14). It contains the following elements:

1. Father's educational achievement level
2. Mother's educational achievement level
3. Possessions in the home
4. Number of books in the home
5. Number of rooms in the home

Whereas the Youth in Transition study SEL measure contained indicators of paternal occupational status and ratio of rooms per person in the home (rather than simply the number of rooms) these elements were not included in the SES measure described here for two reasons. Father's occupational status was not included because of the large amount of missing data for this variable (more than 20 per cent). The room per person ratio was not used because it was found that the number of rooms alone provided a more reliable correlate of the other variables included in the SES measure (See Table A-3).

Scoring. --The non-missing data scores for the individual items were standardized, summed, and divided by their total number, to gain a mean SES score for each respondent. The higher the score, the higher the parental socioeconomic status. If any case yielded more than two missing data scores, the SES score was not computed and the case was coded as missing data on the SES variable.

Reliability. --The level of intercorrelations between the various items suggests reasonable reliability (Table A-3). The index demonstrates moderate levels of internal consistency in both the developmental (coefficient alpha = .756) and replication sample (coefficient alpha = .766). It was also found that respondent age is negatively and mildly related to the respondent SES scores (r = -.301). This suggests that differences in SES scores between age groups may be, in part, the spurious product of the effects of generational differences (e. g. , a lack of television sets in most homes more than 25 years ago, and/or lower educational expectations and fewer opportunities in earlier years). However, the measure displays sufficient reliability to warrant its use in this exploratory research effort.

Items. --The items contained in the final measure are listed below for respondents grouped by race and age.

Table A-2

MEANS, STANDARD DEVIATIONS AND PERCENT
MISSING DATA FOR SES ITEMS BY RACE

Item	Group*	Mean	Standard Deviation	N	Product-Moment Correlations					
					1	2	3	4	5	6
Father's Education	T	2.6	1.4	1438						
	B	2.3	1.2	349						
	W	2.8	1.4	890						
Mother's Education	T	2.7	1.2	1477	.61					
	B	2.5	1.6	366	.62					
	W	2.8	1.2	908	.61					
Number of Possessions in Home	T	14.1	4.3	1447	.35	.34				
	B	13.0	4.3	356	.23	.30				
	W	14.8	3.9	888	.37	.33				
Number of Books in Home	T	3.1	1.2	1448	.40	.37	.53			
	B	2.8	1.1	357	.39	.36	.46			
	W	3.2	1.3	885	.40	.36	.52			
Number of Rooms in Home	T	3.8	1.9	1441	.29	.31	.45	.43		
	B	3.2	1.8	352	.12	.25	.38	.36		
	W	4.2	1.8	883	.31	.28	.43	.41		
Number of Persons in Home	T	4.8	2.1	1440	-.13	-.09	-.15	.09	.02	
	B	5.2	2.2	350	-.07	.03	-.07	-.09	.02	
	W	4.5	2.1	885	-.12	-.07	-.13	-.05	.09	
Number of Rooms per Person in Home	T	1.8	1.7	1428	-.27	-.25	-.41	-.31	-.65	.51
	B	2.3	2.0	346	-.11	-.12	-.31	-.25	-.65	.51
	W	1.4	1.3	879	-.29	-.23	-.42	-.27	-.61	.49

* T = Total Sample (N = 1564, less cases with missing data).

B = Blacks (N = 307, less cases with missing data).

W = Whites (N = 830, less cases with missing data).

RECREATIONAL AVAILABILITY AND INTEREST INDICES

Variable. --These measures were designed to indicate the level of availability and interest in recreational facilities on or near the respondent's post.

Description. --The indices are composed of 12 items describing various types of recreational activity. The respondent is provided five closed-response choices describing the extent to which he is interested in the type of activity listed and the extent to which that type of activity is available on or near the post to which the respondent is currently assigned.

Scoring. --The respondent's total scores for each measure are derived by calculating the mean of the untransformed non-missing responses for each item set.

Item. --The items included in both sets are listed below along with the means and standard deviations derived for each item for the developmental and replication samples.

If any case had more than ten missing data scores, the total scale score was not computed and the case was coded as missing data.

Reliability. --The scale yielded coefficient alphas of .898 for the developmental sample and .890 for the replication sample.

Items. --The twenty-one items included in the final scale are listed below, along with the means and standard deviations of the untransformed scores for both the developmental and replication samples.

A-47

Item No.	Item	Mean D Sample	Mean R Sample	SD D Sample	SD R Sample	N D Sample	N R Sample
VI - 7.	Educational programs (Army Sponsored)						
(a)	To what extent are you interested in using Army sponsored educational programs?	3.68	3.66	1.27	1.28	663	694
(b)	To what extent are Army-sponsored educational programs available to you?	3.49	3.46	1.21	1.24	656	680
VI - 8.	Sightseeing tours						
(a)	To what extent are you interested in going on sight-seeing tours?	3.16	3.03	1.42	1.47	662	695
(b)	To what extent are quality sightseeing tours available to you?	2.68	2.71	1.31	1.34	647	675
VI - 9.	EM or NCO clubs						
(a)	To what extent are you interested in going to service clubs?	2.40	2.86	1.32	1.39	664	694
(b)	To what extent are quality service clubs available to you?	3.42	3.40	1.22	1.23	656	689
VI - 10.	Television programs						
(a)	To what extent are you interested in watching television programs?	3.68	3.67	1.26	1.23	662	696
(b)	To what extent is quality television programming available to you?	2.91	3.01	1.41	1.39	660	690
VI - 11.	Special events (for example, live entertainment, shows, dances)						
(a)	To what extent are you interested in attending special entertainment events?	3.57	3.54	1.26	1.33	661	694
(b)	To what extent are quality special entertainment events available to you?	2.65	2.61	1.22	1.22	651	684
VI - 12.	Places to meet persons of the opposite sex						
(a)	To what extent are you interested in going places where you can meet persons of the opposite sex?	4.02	3.98	1.35	1.38	661	695
(b)	To what extent are there nearby places available to you where you can meet persons of the opposite sex?	2.79	2.85	1.40	1.39	651	682

Item No.	Item	Mean		SD		N	
		D Sample	R Sample	D Sample	R Sample	D Sample	R Sample
VI - 1.	Movie theatres						
	(a) To what extent are you interested in attending movies?	3.32	3.26	1.26	1.30	664	694
	(b) To what extent are quality movies available to you?	3.19	3.29	1.23	1.17	653	689
VI - 2.	Snack facilities						
	(a) To what extent are you interested in using snacking facilities?	3.27	3.24	1.22	1.24	664	691
	(b) To what extent are quality snack facilities available to you?	3.25	3.23	1.19	1.22	661	689
VI - 3.	Outdoor athletic facilities						
	(a) To what extent are you interested in using outdoor athletic facilities?	3.29	3.30	1.33	1.36	663	694
	(b) To what extent are quality outdoor athletic facilities available to you?	3.14	3.19	1.23	1.27	659	683
VI - 4.	Indoor athletic facilities						
	(a) To what extent are you interested in using indoor athletic facilities?	3.49	3.46	1.27	1.33	663	695
	(b) To what extent are quality indoor athletic facilities available to you?	3.42	3.45	1.22	1.20	656	689
VI - 5.	Hobby shops						
	(a) To what extent are you interested in using hobby shops?	2.99	2.94	1.39	1.35	665	694
	(b) To what extent are quality hobby shops available to you?	3.12	3.08	1.19	1.79	647	688
VI - 6.	Library						
	(a) To what extent are you interested in using library facilities?	3.12	3.11	1.27	1.27	665	694
	(b) To what extent are quality library facilities available to you?	3.51	3.51	1.17	1.16	653	682

APPENDIX B

SURVEY QUESTIONNAIRE

DEPARTMENT OF THE ARMY
U.S. ARMY RESEARCH INSTITUTE FOR THE BEHAVIORAL AND SOCIAL SCIENCES
1300 WILSON BOULEVARD
ARLINGTON, VIRGINIA 22209

DIMENSIONS OF ARMY LIFE

This questionnaire is part of a research project sponsored by the Department of the Army in which we are attempting to learn about various features of Army life that have an impact on how the American soldier feels and behaves. You are asked to complete this questionnaire, as your responses will provide information vital to our efforts to improve life in the Army.

This questionnaire includes items primarily asking for your attitudes and opinions about your leaders, your job, the places you live and work in, and your experience prior to entering the service. Other questions ask for your feelings about yourself and other people in general.

The identity of all persons answering this questionnaire will be kept absolutely confidential. This step is taken to protect your privacy. Therefore — DO NOT PLACE YOUR NAME OR ANY OTHER IDENTIFYING MARKS ON THIS QUESTIONNAIRE.

If the information you give is to be helpful, it is important that you answer each question as thoughtfully and frankly as possible. Take as much time as you need. This is not a test; there are no right or wrong answers. We simply want to know how you feel about certain things.

If you have any questions or need clarification concerning any particular item, please feel free to approach the person administering the questionnaire, or raise your hand and they will come to you. DO NOT DISCUSS EITHER THE CONTENTS OF THIS QUESTIONNAIRE OR YOUR RESPONSES TO IT WITH ANY FELLOW SOLDIER, EITHER NOW OR IN THE FUTURE, as doing so might bias the answers of those who have not yet completed the questionnaire.

THANK YOU FOR YOUR COOPERATION

PT-4996

1

NOTE: IN SECTION 1., SUPERVISOR MEANS THE PERSON TO WHOM YOU REPORT DIRECTLY. SUBORDINATES MEANS YOU AND OTHERS WHO WORK FOR YOUR SUPERVISOR.

SECTION I

In this section, we would like to ask you about your immediate supervisor. (If you are confined to a stockade or correctional facility, describe how you feel about the supervisor you had prior to your confinement.)

Your supervisor:

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent
	[1]	[2]	[3]	[4]	[5]

1. To what extent is your supervisor concerned about the personal problems of his subordinates? ① ② ③ ④ ⑤

2. To what extent is your supervisor technically competent to perform his duties? ① ② ③ ④ ⑤

3. To what extent does your supervisor keep his subordinates informed? ① ② ③ ④ ⑤

4. To what extent does your supervisor plan ahead? ① ② ③ ④ ⑤

5. To what extent does your supervisor keep himself informed about the work that is being done by his subordinates? ① ② ③ ④ ⑤

6. To what extent does your supervisor lack sufficient experience to perform his duties? ① ② ③ ④ ⑤

7. To what extent does your supervisor communicate effectively with his subordinates? ① ② ③ ④ ⑤

8. To what extent does your supervisor fail to provide for the everyday needs of his subordinates? ① ② ③ ④ ⑤

9. To what extent does your supervisor fail to keep his subordinates busy with challenging tasks? ① ② ③ ④ ⑤

10. To what extent does your supervisor anticipate and solve problems before they get out of hand? ① ② ③ ④ ⑤

11. To what extent is your supervisor unfriendly and hard to approach? ① ② ③ ④ ⑤

12. To what extent is your supervisor willing to make changes in ways of doing things? ① ② ③ ④ ⑤

13. To what extent does your supervisor encourage subordinates to work together as a team? ① ② ③ ④ ⑤

14. To what extent does your supervisor keep himself informed about the progress his subordinates are making in their work? ① ② ③ ④ ⑤

15. To what extent is your supervisor unwilling to accept responsibility for mistakes made by his subordinates? ① ② ③ ④ ⑤

16. To what extent does your supervisor work right along with his men? ① ② ③ ④ ⑤

Continue on next column.

Your supervisor:

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent
	[1]	[2]	[3]	[4]	[5]

17. To what extent does your supervisor depend too much on threats-rather than rewards-to get things done? ① ② ③ ④ ⑤

18. To what extent does your supervisor offer new ideas for solving job-related problems? ① ② ③ ④ ⑤

19. To what extent does your supervisor fail to explain why a particular action is important? ① ② ③ ④ ⑤

20. To what extent does your supervisor set a poor example for his men? ① ② ③ ④ ⑤

21. To what extent does your supervisor know and treat his subordinates as individuals? ① ② ③ ④ ⑤

22. To what extent is your supervisor not aware of his subordinates' capabilities? ① ② ③ ④ ⑤

23. To what extent does your supervisor make decisions quickly and stick to them? ① ② ③ ④ ⑤

SECTION II

Now we would like to know about the job you are currently assigned to and some of your feelings about it. (If you are confined to a stockade or correctional facility, describe the job you had prior to your confinement).

Your job:

	To a very little extent	To a little extent	To some extent	To a great extent	To a very great extent
	[1]	[2]	[3]	[4]	[5]

1. To what extent do you enjoy performing the actual day-to-day activities that make up your job? ① ② ③ ④ ⑤

2. To what extent are there things about working here (people, policies, conditions) that encourage you to work hard? ① ② ③ ④ ⑤

3. To what extent do you gain a sense of accomplishment from the day-to-day activities that make up your job? ① ② ③ ④ ⑤

Continue on next page.

Your job:

	To a very little extent [1]	To a little extent [2]	To some extent [3]	To a great extent [4]	To a very great extent [5]

4. To what extent do you feel the training you have received has improved your ability to perform your job?   ① ② ③ ④ ⑤

5. To what extent do you feel that the people you work with are a team that works together?   ① ② ③ ④ ⑤

6. To what extent does your MOS (Military Occupational Specialty) match your interests, knowledge, and skills?   ① ② ③ ④ ⑤

7. In your opinion, how important is the mission assigned to this command?

___ [1] Not important at all
___ [2] Somewhat important
___ [3] Fairly important
___ [4] Moderately important
___ [5] Very important

8. How important is the job you are doing in the Army?

___ [1] Not important at all
___ [2] Somewhat important
___ [3] Fairly important
___ [4] Moderately important
___ [5] Very important

9. How interested are you in the job you are doing in the Army?

___ [1] Very uninterested
___ [2] Somewhat uninterested
___ [3] Neither interested or uninterested
___ [4] Fairly interested
___ [5] Very interested

10. How satisfied do you feel about your chances for promotion?

___ [1] Very dissatisfied
___ [2] Somewhat dissatisfied
___ [3] Neither satisfied or dissatisfied
___ [4] Fairly satisfied
___ [5] Very satisfied

11. How often are you assigned tasks not related to your MOS (Military Occupational Specialty)?

___ [1] Never
___ [2] Very seldom
___ [3] Seldom
___ [4] Often
___ [5] Very often, if not constantly

Continue on next column.

12. How often are you assigned meaningless tasks?

___ [1] Daily
___ [2] Once or twice a week
___ [3] Once or twice a month
___ [4] Seldom
___ [5] Never

13. All in all, how satisfied are you with your job?

___ [1] Very dissatisfied
___ [2] Somewhat dissatisfied
___ [3] Neither satisfied or dissatisfied
___ [4] Fairly satisfied
___ [5] Very satisfied

14. Which one of the items below best describes the actual work that you do in the Army, no matter what your MOS is: (Check only the one category that best applies to you)

___ (a) Combat infantry, gun crews, tank crews: Includes most jobs in combat operations. For example, infantryman, tank crewman, artillery crewman and combat engineer.

___ (b) Electronics repair: Includes maintenance and repair of electronic equipment. For example, radio, radar, TV equipment, computer and electronic equipment repairman.

___ (c) Communications and intelligence: Includes operation and monitoring of radio, radar, and other communications equipment; also gathering and analyzing intelligence information. For example, radio operator, radar crewman, military intelligence analyst and photo interpreter.

___ (d) Medical and dental: Includes patient care and treatment. For example, medical corpsman, medical laboratory technician, X-ray technician, pharmacist and dental technician.

___ (e) Other technical specialists: For example, surveyor, draftsman, photographer.

___ (f) Administrative specialists and clerks: Includes personnel and administration; also includes all clerical jobs, accounting jobs, information and education jobs, and all data processing jobs. For example, postal clerk, clerk typist, supply man, chaplain's assistant, computer programmer.

___ (g) Electrical-mechanical equipment repair: Includes maintenance and repair of electrical, mechanical equipment. For example, automotive mechanic, lineman, office machine repairman.

___ (h) Craftsmen: Includes jobs used in the construction of buildings and in the installation and maintenance of utilities. For example, carpenter, mason, plumber, electrician, welder.

___ (i) Service and supply handlers: Includes protective and personal services, motor transportation, food, service and nonclerical supply jobs. For example, policeman, cook or chef, light or heavy vehicle driver and laundry and dry-cleaning jobs.

___ (j) Other. (Please specify) _____

Continue on next page.

SECTION III

To what extent do members of your unit do the following? <u>Unit</u> refers to the post to which you are currently assigned. (If you are confined to a stockade or correctional facility, describe the unit you were working in prior to your confinement.)

Your unit:

	To a very little extent [1]	To a little extent [2]	To some extent [3]	To a great extent [4]	To a very great extent [5]
1. To what extent do members of your unit maintain and properly wear their uniforms?	①	②	③	④	⑤
2. To what extent do members of your unit ignore military courtesies (salute, exchange proper greetings, etc.)?	①	②	③	④	⑤
3. To what extent do members of your unit "get over" on their supervisors?	①	②	③	④	⑤
4. To what extent do members of your unit fail to show up on time?	①	②	③	④	⑤
5. To what extent do members of your unit keep living and working areas in clean and orderly condition?	①	②	③	④	⑤
6. To what extent do members of your unit process paperwork in an efficient manner?	①	②	③	④	⑤
7. To what extent do members of your unit cooperate with each other?	①	②	③	④	⑤
8. To what extent do members of your unit let racial conflicts interfere with their work?	①	②	③	④	⑤
9. To what extent do members of your unit readily respond to orders?	①	②	③	④	⑤
10. To what extent do members of your unit need direct supervision to get the job done right?	①	②	③	④	⑤
11. To what extent do members of your unit display disorderly conduct off-post?	①	②	③	④	⑤
12. To what extent do members of your unit obey lawful orders?	①	②	③	④	⑤
13. To what extent do members of your unit sit around on duty hours doing nothing?	①	②	③	④	⑤
14. To what extent do members of your unit do poor quality work?	①	②	③	④	⑤
15. To what extent do members of your unit work together as a team?	①	②	③	④	⑤
16. To what extent do members of your unit maintain a high level of combat readiness?	①	②	③	④	⑤
17. To what extent do members of your unit do what ever needs to be done?	①	②	③	④	⑤

Continue on next column.

Your unit:

	To a very little extent [1]	To a little extent [2]	To some extent [3]	To a great extent [4]	To a very great extent [5]
18. To what extent do members of your unit maintain a neat personal appearance?	①	②	③	④	⑤
19. To what extent do members of your unit perform well without close supervision?	①	②	③	④	⑤
20. To what extent do members of your unit volunteer to work past duty hours?	①	②	③	④	⑤
21. To what extent do members of your unit display racial prejudice?	①	②	③	④	⑤
22. To what extent do members of your unit fail to get their hair cut according to regulations?	①	②	③	④	⑤
23. To what extent do members of your unit help each other out?	①	②	③	④	⑤
24. To what extent do members of your unit do just enough work to get by?	①	②	③	④	⑤
25. To what extent do members of your unit steal from each other?	①	②	③	④	⑤

SECTION IV

In this section, you are asked to describe your feelings about your unit, race relations, local community and related issues. <u>Unit</u> refers to the post to which you are currently assigned. (If you are confined, when asked about your unit, describe the unit you were assigned to prior to confinement.)

<u>Indicate how much you agree with the following</u>: If you feel you have insufficient information to judge an item, write "Don't Know" or "DK" after it.

	Strongly agree [1]	Moderately agree [2]	Agree mildly [3]	Disagree mildly [4]	Moderately disagree [5]	Strongly disagree [6]
1. Every person should give some of his time for the good of his town or country.	①	②	③	④	⑤	⑥
2. In order to merit the respect of others, a person should show a desire to better himself.	①	②	③	④	⑤	⑥
3. In my unit, a man usually doesn't get the information he needs to plan ahead.	①	②	③	④	⑤	⑥
4. Whites in my unit have a good reason to distrust non-whites.	①	②	③	④	⑤	⑥
5. An unfairly large number of non-whites in my unit are assigned to non-technical jobs.	①	②	③	④	⑤	⑥

Continue on next page.

How much do you agree with the following?

	Strongly agree [1]	Moderately agree [2]	Agree mildly [3]	Disagree mildly [4]	Moderately disagree [5]	Strongly disagree [6]

6. One of the things you should consider in choosing your friends in the Army is whether they may help your chances for promotion. ① ② ③ ④ ⑤ ⑥

7. It is the duty of each person to do his job the very best he can. ① ② ③ ④ ⑤ ⑥

8. Because of the rebellious ideas of youth, there are more problems in the world. ① ② ③ ④ ⑤ ⑥

9. One should avoid doing things in public which appear wrong to others, even though one knows that these things are right. ① ② ③ ④ ⑤ ⑥

10. Men in my unit know how to get the job done right. ① ② ③ ④ ⑤ ⑥

11. The Army should make a greater effort to assist non-whites to qualify for enlistment and technical ratings. ① ② ③ ④ ⑤ ⑥

12. Non-whites in my unit have good reason to be angry. ① ② ③ ④ ⑤ ⑥

13. In my unit, if a man needs help he can count on others to provide it. ① ② ③ ④ ⑤ ⑥

14. Whites in my unit should treat non-whites better than they do. ① ② ③ ④ ⑤ ⑥

15. In the long run, it is better for our country if young people are allowed a great deal of personal freedom and aren't strictly disciplined. ① ② ③ ④ ⑤ ⑥

16. Members of minority groups have a harder time in the Army than others. ① ② ③ ④ ⑤ ⑥

17. What youth needs most is strict discipline, rugged determination, and the will to work and fight for family and country. ① ② ③ ④ ⑤ ⑥

18. Strict Army discipline has a good influence on most young men. ① ② ③ ④ ⑤ ⑥

19. Non-whites in my unit should be more united in order to improve things. ① ② ③ ④ ⑤ ⑥

20. I feel very bad when I have failed to finish a job I promised I would do. ① ② ③ ④ ⑤ ⑥

21. White soldiers are punished less severely than non-whites for the same offenses. ① ② ③ ④ ⑤ ⑥

Continue on next column.

How much do you agree with the following?

	Strongly agree [1]	Moderately agree [2]	Agree mildly [3]	Disagree mildly [4]	Moderately disagree [5]	Strongly disagree [6]

22. It is worth considerable effort to assure one's self of a good name with the right kind of people. ① ② ③ ④ ⑤ ⑥

23. Members of my unit are a good bunch to work with. ① ② ③ ④ ⑤ ⑥

24. Whites do not usually have to be as good as non-whites to be promoted to the same positions in the Army. ① ② ③ ④ ⑤ ⑥

25. An ambitious person can almost always achieve his goals. ① ② ③ ④ ⑤ ⑥

26. Non-whites in my unit have good reason to distrust whites. ① ② ③ ④ ⑤ ⑥

27. The U.S. Army is one of the best armed services in world. ① ② ③ ④ ⑤ ⑥

28. Obedience and respect for authority are the most important virtues children should learn. ① ② ③ ④ ⑤ ⑥

29. Non-whites in my unit get more than their share of dirty jobs. ① ② ③ ④ ⑤ ⑥

30. The raising of one's social position is one of the more important goals in life. ① ② ③ ④ ⑤ ⑥

31. Young people sometimes get rebellious ideas, but as they grow up, they ought to get over them and settle down. ① ② ③ ④ ⑤ ⑥

32. The Army should recognize that it is not always fair to apply test standards to minority groups that have been developed for whites. ① ② ③ ④ ⑤ ⑥

33. Ambition is the most important factor in determining success in life. ① ② ③ ④ ⑤ ⑥

34. I don't care very much for the guys I work with. ① ② ③ ④ ⑤ ⑥

35. I don't trust the others in my unit. ① ② ③ ④ ⑤ ⑥

36. Commanding officers should be more responsive to the needs of minority group members. ① ② ③ ④ ⑤ ⑥

37. In order for us to do good work, it is necessary that our leaders outline carefully what is to be done and exactly how to go about it. ① ② ③ ④ ⑤ ⑥

Continue on next page.

How much do you agree with the following?

	Strongly agree [1]	Moderately agree [2]	Agree mildly [3]	Disagree mildly [4]	Moderately disagree [5]	Strongly disagree [6]
38. In my unit, non-whites tend to segregate themselves from whites.	①	②	③	④	⑤	⑥
39. Letting your friends down is not so bad because you can't do good all the time for everybody.	①	②	③	④	⑤	⑥
40. There is so much discrimination against minority soldiers by local civilians, minority soldiers don't want to leave the post.	①	②	③	④	⑤	⑥
41. Local landlords discriminate against non-whites.	①	②	③	④	⑤	⑥
42. There are local business establishments where it is not safe for white soldiers to go.	①	②	③	④	⑤	⑥
43. Local civilians tend to treat American soldiers of all races fairly.	①	②	③	④	⑤	⑥

SECTION V

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is true or false as it pertains to you personally.

	True [1]	False [5]
1. I have never felt that I was punished without cause.	①	⑤
2. When I don't know something I don't mind admitting it.	①	⑤
3. I can remember "playing sick" to get out of something.	①	⑤
4. No matter who I'm talking to, I'm always a good listener.	①	⑤
5. On a few occasions, I have given up doing something because of my lack of ability.	①	⑤
6. I never hesitate to go out of my way to help someone in trouble.	①	⑤
7. It is sometimes hard for me to go on with my work if I am not encouraged.	①	⑤
8. I have never intensely disliked anyone.	①	⑤

Continued next column.

	True [1]	False [5]
9. On occasion I have had doubts about my ability to succeed in life.	①	⑤
10. I sometimes think when people have a misfortune they only got what they deserved.	①	⑤

SECTION VI

In this section, you are asked various questions about your environment – the places where you spend most of your time – both on-post and off-post. Some of the questions are about activities which might get you into trouble. Remember, this questionnaire cannot be traced to you, so please answer each question honestly and completely. (If you are confined to a stockade or correctional facility, describe facilities on post you were assigned to prior to confinement.)

Recreational Facilities

To what extent are you interested in using the following types of recreational facilities and to what extent are quality facilities of each type available for your use on or near the post to which you are currently assigned?

	To a very little extent, if any [1]	To a little extent [2]	To some extent [3]	To a great extent [4]	To a very great extent [5]
1. Movie theatres					
(a) To what extent are you interested in attending movies?	①	②	③	④	⑤
(b) To what extent are quality movies available to you?	①	②	③	④	⑤
2. Snack facilities					
(a) To what extent are you interested in using snacking facilities?	①	②	③	④	⑤
(b) To what extent are quality snack facilities available to you?	①	②	③	④	⑤
3. Outdoor athletic facilities					
(a) To what extent are you interested in using outdoor athletic facilities?	①	②	③	④	⑤
(b) To what extent are quality outdoor athletic facilities available to you?	①	②	③	④	⑤
4. Indoor athletic facilities					
(a) To what extent are you interested in using indoor athletic facilities?	①	②	③	④	⑤
(b) To what extent are quality indoor athletic facilities available to you?	①	②	③	④	⑤

Continue on next page.

	To a very little extent, if any	To a little extent	To some extent	To a great extent	To a very great extent
	[1]	[2]	[3]	[4]	[5]

5. Hobby shops

___ (a) To what extent are you <u>interested</u> in using hobby shops? ① ② ③ ④ ⑤

___ (b) To what extent are quality hobby shops available to you? ① ② ③ ④ ⑤

6. Library

___ (a) To what extent are you <u>interested</u> in using library facilities? ① ② ③ ④ ⑤

___ (b) To what extent are quality library facilities available to you? ① ② ③ ④ ⑤

7. Educational programs (Army Sponsored)

___ (a) To what extent are you <u>interested</u> in using Army sponsored educational programs? ① ② ③ ④ ⑤

___ (b) To what extent are Army-sponsored educational programs available to you? ① ② ③ ④ ⑤

8. Sightseeing tours

___ (a) To what extent are you <u>interested</u> in going on sightseeing tours? ① ② ③ ④ ⑤

___ (b) To what extent are quality sightseeing tours available to you? ① ② ③ ④ ⑤

9. EM or NCO clubs

___ (a) To what extent are you <u>interested</u> in going to service clubs? ① ② ③ ④ ⑤

___ (b) To what extent are quality service clubs available to you? ① ② ③ ④ ⑤

10. Television programs

___ (a) To what extent are you <u>interested</u> in watching television programs? ① ② ③ ④ ⑤

___ (b) To what extent is quality television programming available to you? ① ② ③ ④ ⑤

11. Special events (for example, live entertainment, shows, dances)

___ (a) To what extent are you <u>interested</u> in attending special entertainment events? ① ② ③ ④ ⑤

___ (b) To what extent are quality special entertainment events available to you? ① ② ③ ④ ⑤

Continue on next column.

	To a very little extent, if any	To a little extent	To some extent	To a great extent	To a very great extent
	[1]	[2]	[3]	[4]	[5]

12. Places to meet persons of the opposite sex

___ (a) To what extent are you <u>interested</u> in going to places where you can meet persons of the opposite sex? ① ② ③ ④ ⑤

___ (b) To what extent are there nearby places available to you where you can meet persons of the opposite sex? ① ② ③ ④ ⑤

13. Other type of recreational facility not mentioned above. (Please describe) _____

___ (a) To what extent are you interested in using the type of recreational facility you described? ① ② ③ ④ ⑤

___ (b) To what extent is the type of facility that you described <u>available</u> to you? ① ② ③ ④ ⑤

SECTION VII

This final section asks for information about your background and current status in the Army. The information is very important for research purposes. Remember, there is no way anyone can associate your answers with you personally, so please answer each question as honestly as possible.

1. Your present age: _____ years.

2. Race:

___ [1] Black   ___ [4] White

___ [2] Oriental   ___ [5] Other (Please specify)

___ [3] Spanish-American

_____

3. How much schooling have you had?

___ [1] Completed grade school or less

___ [2] Some high school

___ [3] Completed high school or GED

___ [4] Some college

___ [5] Completed college

___ [6] Some graduate school

Continued next page.

4. While you were growing up-say until you were eighteen - what kind of community did you live in most of the time?

    ____ [1] Rural area or farm

    ____ [2] Town or small city

    ____ [3] Suburban area near a large city

    ____ [4] Large city

5. While you were growing up, what region of the country did you primarily live in?

    ____ [1] Northeast

    ____ [2] South

    ____ [3] Midwest

    ____ [4] West (including Hawaii and Alaska)

    ____ [5] None of the above

6. What has been or was your father's (or male guardian's) primary occupation during most of the time you were growing up?

    (Please be specific as to type of work and highest position held. For example write "Army officer, Lt. Colonel", not just "military officer"; or "factory worker foreman", not "factory worker".

    _____

    (type of work and highest position held)

7. How much schooling have your father and mother had? (Check one for each parent.)

	Father	Mother	
Completed grade school or less	____	____	[1]
Some high school	____	____	[2]
Completed high school or GED	____	____	[3]
Some college	____	____	[4]
Completed college	____	____	[5]
Some graduate school	____	____	[6]

8. Did you live at home with your parents most of the time while you were growing up? (Check one)

    ____ YES

    ____ NO If no, skip to question 13.

9. Which of the following were present in your parent's home when you were growing up? (Check as many as apply.)

    ____ A radio

    ____ A telephone

    ____ A television

    ____ A bicycle

    ____ A phonograph

    ____ A bible

    ____ A dictionary

    ____ A set of encyclopedia

    ____ 30 other books or more

    ____ A family car

    ____ A camera

    ____ A typewriter

    ____ A dog or cat

    ____ A fish in a tank

    ____ A newspaper delivered daily

    ____ A magazine subscription

    ____ A pair of binoculars

    ____ More than 10 phonograph records

    ____ A map or globe of the world

Continued next column.

10. How many books were in your parents house while you were growing up?

    ____ [1] None, or very few (0-10 books)

    ____ [2] A few books (11-25)

    ____ [3] One bookcase full (26-100)

    ____ [4] Two bookcases full (101-250)

    ____ [5] Three or four bookcases full (251-500)

    ____ [6] A room full - - a library (501 – or more)

11. How many rooms (including bathrooms) were in your parents home while you were growing up?

    ____ [1] 4 rooms or less

    ____ [2] 5 rooms

    ____ [3] 6 rooms

    ____ [4] 7 rooms

    ____ [5] 8 rooms

    ____ [6] 9 rooms

    ____ [7] 10 rooms or more

    ____ [8] I did not live in a home with my parents

12. How many persons, besides yourself lived in your parents' home while you were growing up?

    ____ [1] 1 person

    ____ [2] 2 persons

    ____ [3] 3 persons

    ____ [4] 4 persons

    ____ [5] 5 persons

    ____ [6] 6 persons

    ____ [7] 7 persons

    ____ [8] 8 persons or more

13. While you were growing up, most of the time your parents were what?

    ____ [1] Married and living together

    ____ [2] Married but not living together

    ____ [3] Divorced

    ____ [4] One parent deceased

    ____ [5] Both parents deceased

14. How many brothers do you have?

    ____ [1] None

    ____ [2] One

    ____ [3] Two

    ____ [4] Three to five

    ____ [5] More than five

15. How many sisters do you have?

    ____ [1] None

    ____ [2] One

    ____ [3] Two

    ____ [4] Three to five

    ____ [5] More than five

16. What is your marital status?

____ [1] Single
____ [2] Married
____ [3] Legally separated
____ [4] Divorced
____ [5] Widowed

17. How many children do you have?

____ [1] One
____ [2] Two
____ [3] Three
____ [4] Four
____ [5] Five or more
____ [6] None

IF YOU ARE MARRIED, answer questions 18-20 below.

IF YOU ARE SINGLE, skip to question 21.

18. To what extent are you bothered by marital problems?

____ [1] To a very little extent
____ [2] To a little extent
____ [3] To some extent
____ [4] To a great extent
____ [5] To a very great extent

19. Is your spouse currently living with you on or near the post to which you are assigned?

____ [1] Yes   ____ [5] No

20. To what extent would you describe your marriage as being a happy one?

____ [1] To a very little extent
____ [2] To a little extent
____ [3] To some extent
____ [4] To a great extent
____ [5] To a very great extent

21. To what extent are you bothered by financial problems?

____ [1] To a very little extent
____ [2] To a little extent
____ [3] To some extent
____ [4] To a great extent
____ [5] To a very great extent

Continue on next column.

We are interested in knowing more about your life when you were growing up and prior to your entry into the service. Some of the items may be difficult for you to answer; they may be things you've told very few people. However, please respond to each item. Remember this questionnaire is totally anonymous. There is no way you can be identified by your answers.

always [1] often [2] sometimes [3] seldom [4] never [5]

22. How often did your parents (or guardians) do each of the following while you were growing up?

(a) Completely ignore you after you had done something wrong. ① ② ③ ④ ⑤

(b) Act as if they didn't care about you anymore. ① ② ③ ④ ⑤

(c) Disagree with each other about how to raise you. ① ② ③ ④ ⑤

(d) Actually slap you. ① ② ③ ④ ⑤

(e) Take away your privileges (TV, dates, car, movies, etc.). ① ② ③ ④ ⑤

(f) Blame you or criticize you when you didn't deserve it. ① ② ③ ④ ⑤

(g) Threaten to slap you. ① ② ③ ④ ⑤

(h) Yell, shout or scream at you. ① ② ③ ④ ⑤

(i) Disagree about punishing you. ① ② ③ ④ ⑤

(j) Nag at you. ① ② ③ ④ ⑤

(k) Direct you to perform certain chores around the house. ① ② ③ ④ ⑤

23. When you were growing up, how did you feel about how much affection you got from your father (or male guardian)?

____ [1] Wanted and got enough affection
____ [2] Wanted slightly more than I received
____ [3] Wanted more than I received
____ [4] Did not want affection from him

24. When you were growing up, how did you feel about how much affection you got from your mother (or female guardian)?

____ [1] Wanted and got enough affection
____ [2] Wanted slightly more than I received
____ [3] Wanted more than I received
____ [4] Did not want affection from her

Continue on next page.

25. When you were growing up, how close did you feel to your father (or male guardian)?

    ____ [1] Extremely close
    ____ [2] Quite close
    ____ [3] Fairly close
    ____ [4] Not very close

26. How close did you feel to your mother (or female guardian) at that time?

    ____ [1] Extremely close
    ____ [2] Quite close
    ____ [3] Fairly close
    ____ [4] Not very close

27. When you were growing up, how much did you want to be the kind of person your father (or male guardian) is when you became an adult?

    ____ [1] Very much
    ____ [2] Somewhat
    ____ [3] A little
    ____ [4] Not very much
    ____ [5] Not at all

28. How much did you want to be like the kind of person your mother (or female guardian) is?

    ____ [1] Very much
    ____ [2] Somewhat
    ____ [3] A little
    ____ [4] Not very much
    ____ [5] Not at all

The following question is concerned about the relations you had with your parents (or guardian), jobs, and school experiences you had when you were growing up. If you did not live with your parents (or guardian) or never held a job, please check "Not applicable" for the appropriate item.

		very untrue [1]	fairly untrue [2]	fairly true [3]	very true [4]	not applicable [5]
29.	How true is each of the following about your life when you were growing up?					
(a)	My family was happy together	①	②	③	④	⑤
(b)	I did not like school.	①	②	③	④	⑤
(c)	My parents depended on me.	①	②	③	④	⑤
(d)	Holding a steady job was difficult for me.	①	②	③	④	⑤

		very untrue [1]	fairly untrue [2]	fairly true [3]	very true [4]	not applicable [5]
	How true is each of the following about your life when you were growing up?					
(e)	I had difficulty with school work.	①	②	③	④	⑤
(f)	My family did things together.	①	②	③	④	⑤
(g)	Jobs I held were boring.	①	②	③	④	⑤
(h)	I had to take care of my brothers and sisters.	①	②	③	④	⑤
(i)	I enjoyed school.	①	②	③	④	⑤
(j)	My parents were concerned about my welfare.	①	②	③	④	⑤
(k)	I frequently lost jobs because I arrived to work late.	①	②	③	④	⑤
(l)	My parents (or guardians) were not happy with the grades I received in school.	①	②	③	④	⑤
(m)	I would usually take a job and quit after a few days or weeks.	①	②	③	④	⑤
(n)	I felt I could talk to my father (or male guardian).	①	②	③	④	⑤
(o)	My teachers did not care for me.	①	②	③	④	⑤
(p)	I had difficulty getting along with people I worked with.	①	②	③	④	⑤
(q)	I felt I could talk to my mother (or female guardian).	①	②	③	④	⑤
(r)	My parents (or legal guardians) were happy together.	①	②	③	④	⑤
(s)	I often changed from job to job.	①	②	③	④	⑤
(t)	I often had to help my family.	①	②	③	④	⑤
(u)	I enjoyed working.	①	②	③	④	⑤

How true is each of the following about your life when you were growing up?

	very untrue. [1]	fairly untrue [2]	fairly true [3]	very true [4]	not applicable [5]
(v) I participated in group activities (Scouting programs, 4-H Club, youth clubs, school projects)	①	②	③	④	⑤
(w) I participated in organized team sports	①	②	③	④	⑤

30. Here is a list of things you might have done when you were growing up that could have gotten you into trouble. Remember, the questionnaire is anonymous and your answers cannot be traced back to you, so please give honest answers.

Please tell us how many times you did the following things when you were growing up:

	never [1]	1 time [2]	2 times [3]	3 or 4 times [4]	5 or more times [5]
(a) I stayed out later than my parents (guardians) said I could.	①	②	③	④	⑤
(b) I ran away from home.	①	②	③	④	⑤
(c) I took something not belonging to me worth less than $50.	①	②	③	④	⑤
(d) I went onto someone's land or into some house or building when I wasn't suppose to be there.	①	②	③	④	⑤
(e) I set fire to someone else's property on purpose.	①	②	③	④	⑤
(f) I argued or had a fight with one of my parents.	①	②	③	④	⑤
(g) I got into trouble with the police because of something I did.	①	②	③	④	⑤
(h) I hurt someone badly enough to require bandages or a doctor for their injuries.	①	②	③	④	⑤
(i) I damaged school property on purpose.	①	②	③	④	⑤
(j) I took something from a store without paying for it.	①	②	③	④	⑤
(k) I hit a teacher.	①	②	③	④	⑤
(l) I drank an alcoholic beverage (liquor, beer, wine) without my parents' permission.	①	②	③	④	⑤

Continue on next column.

Please tell us how many times you did the following things when you were growing up:

	never [1]	1 time [2]	2 times [3]	3 or 4 times [4]	5 or more times [5]
(m) I took a car-that didn't belong to someone in my family-without permission of the owner.	①	②	③	④	⑤
(n) I hit my father.	①	②	③	④	⑤
(o) I took part in a fight where a bunch of my friends were against another bunch of kids.	①	②	③	④	⑤
(p) I took something not belonging to me worth more than $50.	①	②	③	④	⑤
(q) I had to bring my parents to school because of some trouble I got into.	①	②	③	④	⑤
(r) I skipped a day of school without a proper excuse.	①	②	③	④	⑤
(s) I used a knife or gun (or some other weapon) to get something from another person.	①	②	③	④	⑤

31. Prior to entering the service, how often did you use each of the following for other than medical reasons?

Before entering the service I used:	Never [1]	Once or twice a year [2]	Three to 10 times a year [3]	Once or twice a month [4]	Once or twice a week [5]	Daily or nearly every day [6]
(a) Tobacco (cigarettes, cigars, etc.)	①	②	③	④	⑤	⑥
(b) Marijuana (pot, grass, Mary Jane, or hashish)	①	②	③	④	⑤	⑥
(c) Stimulants (uppers, speed, bennies, pep pills, etc.)	①	②	③	④	⑤	⑥
(d) Depressants (downers, yellow jackets, red devils, mandrax, quaaludes, THC, etc.)	①	②	③	④	⑤	⑥
(e) Beer and/or wine	①	②	③	④	⑤	⑥
(f) Opiates (Heroin, horse, smack, "H", morphine, opium, etc.)	①	②	③	④	⑤	⑥
(g) Hard liquor (gin, whiskey, vodka, etc.)	①	②	③	④	⑤	⑥

Continue on next page.

Before entering the service I used:

		Never [1]	Once or twice a year [2]	Three to 10 times a year [3]	Once or twice a month [4]	Once or twice a week [5]	Daily or nearly every day [6]
(h)	Hallucinogens (LSD, mescaline, peyote, etc.)	①	②	③	④	⑤	⑥
(i)	Other types of drugs (please specify) _____						
	_____						
	_____	①	②	③	④	⑤	⑥

32. Since joining your present unit, have the following drugs been available to you for your use for other than medical reasons? (If you are confined to a stockade or correctional facility, describe conditions in unit you were assigned to prior to your confinement.)

Since joining your present unit, the following drugs have been available to me for my use for other than medical reasons: (Check as many as apply)

_____ (a) Tobacco (cigarettes, cigars, etc.)

_____ (b) Marijuana (pot, grass, Mary Jane or hashish)

_____ (c) Stimulants (uppers, speed, bennies, pep pills, etc.)

_____ (d) Depressants (downers, yellow jackets, red devils, mandrax, quaaludes, THC, etc.)

_____ (e) Beer and/or wine

_____ (f) Opiates (heroin, horse, smack, "H", morphine, opium, etc.

_____ (g) Hard liquor (gin, whiskey, vodka, etc.)

_____ (h) Hallucinogens (LSD, mescaline, peyote, etc.)

_____ (i) Other type of drugs (please specify)

_____

_____

_____

33. Since joining your present unit, have you felt pressured by other members of the unit to use the following? (Again, if you are confined to a stockade or correctional facility, describe condition in unit you were assigned to prior to confinement.)

Since joining my present unit, I have felt pressured by other members of the unit to use:
(Check as many as apply)

_____ (a) Tobacco (cigarettes, cigars, etc.)

_____ (b) Marijuana (pot, grass, Mary Jane, or hashish)

_____ (c) Stimulants (uppers, speed, bennies, pep pills, etc.)

_____ (d) Depressants (downers, yellow jackets, red devils, mandrax, quaaludes, THC, etc.)

_____ (e) Beer and/or wine

_____ (f) Opiates (Heroin, horse, smack, "H", morphine, opium, etc.)

_____ (g) Hard liquor (gin, whiskey, vodka, etc.)

_____ (h) Hallucinogens (LSD, Mescaline, peyote, etc.)

_____ (i) Other types of drugs (please specify)

_____

_____

_____

34. *Since joining your present unit*, how often have you used each of the following, for other than medical reasons? (Again, if you are confined to a stockade or correctional facility, describe your level of drug use while assigned to your previous unit.)

Since joining my present unit I have used:	Never [1]	Once or twice a year [2]	Three to ten times a year [3]	Once or twice a month [4]	Once or twice a week [5]	Daily or nearly every day [6]
(a) Tobacco (cigarettes, cigars, etc.)	①	②	③	④	⑤	⑥
(b) Marijuana (pot, grass, Mary Jane or hashish)	①	②	③	④	⑤	⑥
(c) Stimulants (uppers, speed, bennies, pep pills, etc.)	①	②	③	④	⑤	⑥
(d) Depressants (downers, yellow jackets, red devils, mandrax, quaaludes, THC, etc.)	①	②	③	④	⑤	⑥
(e) Beer and/or wine	①	②	③	④	⑤	⑥
(f) Opiates (heroin, horse, smack, "H", morphine, opium, etc.)	①	②	③	④	⑤	⑥
(g) Hard liquor (gin, whiskey, vodka, etc.)	①	②	③	④	⑤	⑥
(h) Hallucinogens (LSD, mescaline, peyote, etc.)	①	②	③	④	⑤	⑥
(i) Other types of drugs (please specify) _____	①	②	③	④	⑤	⑥

35. How many times did the following things happen to you while you were growing up?

I have been:	never [1]	1 time [2]	2 times [3]	3 or 4 times [4]	5 or more times [5]
(a) Arrested by civilian authorities.	①	②	③	④	⑤
(b) Convicted of a crime by a civilian court.	①	②	③	④	⑤
(c) Suspended from school for disciplinary reasons.	①	②	③	④	⑤
(d) Expelled from school.	①	②	③	④	⑤

SECTION VIII

The last few questions concern your military background. The answers you give are very important to our research effort. Therefore, answer each question.

1. What type of unit are you now assigned to? (Check only one category that best applies to your unit.)

a. COMBAT

____ (a) Infantry
____ (b) Airborne Infantry
____ (c) Airmobile Infantry
____ (d) Artillery
____ (e) Armored Calvary
____ (f) Special Forces
____ (g) Engineer (combat)
____ (h) Other (please specify type) _____

b. SUPPORT

____ (i) Headquarters Command
____ (j) Military Police
____ (k) Aircraft Maintenance
____ (l) Signal
____ (m) Supply and Transport
____ (n) Engineer (Construction)
____ (o) Personnel Services
____ (p) Medical
____ (q) Other (please specify type) _____

c. TRAINING

____ (r) BCT
____ (s) AIT
____ (t) Other training unit (please specify type)
_____

d. CORRECTIONAL

____ (u) Post stockade
____ (v) Correctional training facility

2. What was your status when you first entered the Army?

I first entered the Army as a:

____ [1] Volunteer in the Regular Army (RA)
____ [2] Draftee (US)
____ [3] Member of Army Reserve or National Guard who volunteered for active duty.
____ [4] Member of Army Reserve or National Guard who was called to active duty but did not ask for it.

3. Did you join the Army (RA, NG, AR) to avoid being drafted?

____ [1] Yes   ____ [5] No

4. What is your present rank?

    ___ [1]   E-1   ___ [5]   E-5
    ___ [2]   E-2   ___ [6]   E-6
    ___ [3]   E-3   ___ [7]   E-7
    ___ [4]   E-4   ___ [8]   E-8 or E-9

5. What is the highest rank you have held in the Army?

    ___ [1]   E-1   ___ [5]   E-5
    ___ [2]   E-2   ___ [6]   E-6
    ___ [3]   E-3   ___ [7]   E-7
    ___ [4]   E-4   ___ [8]   E-8 or E-9

6. How many times have you been reduced in rank for reasons other than reenlistment or loss of battlefield commissions?

    ___ [1]   Never
    ___ [2]   Once
    ___ [3]   Twice
    ___ [4]   Three or more times

7. How long have you been assigned to your present command or post?

    ___ [1]   Less than 1 month
    ___ [2]   Between 1 and 6 months
    ___ [3]   Between 6 months and 1 year
    ___ [4]   Between 1 and 2 years
    ___ [5]   Between 2 and 5 years
    ___ [6]   Between 5 and 10 years
    ___ [7]   More than 10 years

8. Where are you currently living most of the time?

    ___ [1]   Troop billets, barracks
    ___ [2]   On-post government family housing
    ___ [3]   Off-post government family housing (includes leased and rental guaranteed housing)
    ___ [4]   Off-post private rental
    ___ [5]   Personally owned home
    ___ [6]   Other type of housing (please specify)
    _____

9. How satisfied are you with your present living quarters?

    ___ [1]   Very dissatisfied
    ___ [2]   Somewhat dissatisfied
    ___ [3]   Neither satisfied or dissatisfied
    ___ [4]   Fairly satisfied
    ___ [5]   Very satisfied

10. How long have you served in the Army on active duty? (Check one)

    ___ [1]   Less than 6 months
    ___ [2]   Between 6 months and 1 year
    ___ [3]   Between 1 and 2 years
    ___ [4]   Between 2 and 3 years
    ___ [5]   Between 3 and 5 years
    ___ [6]   Between 5 and 10 years
    ___ [7]   Between 10 and 15 years
    ___ [8]   More than 15 years

11. How many months do you have left to serve on your current enlistment? (Please specify) _____ months.

12. How many times have you been charged with the following offenses by military authorities?

I have been charged with:	Number of times			
	None	1	2	3 or more
AWOL	___	___	___	___
Refusal to follow orders	___	___	___	___
Insubordination	___	___	___	___
Possession or use of drugs	___	___	___	___
Assault without a weapon	___	___	___	___
Drunk and disorderly	___	___	___	___
Driving while under the influence of alcohol	___	___	___	___
Destruction of property	___	___	___	___
Stealing	___	___	___	___
Assault with a weapon	___	___	___	___
Other offense (please specify)				

_____
_____

13. How many times have you been convicted by a military court?

    ___ [1]   1 time
    ___ [2]   2 times
    ___ [3]   3 times
    ___ [4]   4 times
    ___ [5]   5 or more times
    ___ [6]   None

14. How many "Article 15's" have you received?

    ___ [1]   1
    ___ [2]   2
    ___ [3]   3
    ___ [4]   4
    ___ [5]   5 or more
    ___ [6]   None

15. Which of the following statements best describes your feelings about a career in the Army?

    ____ [1] It is the only career that could really satisfy me.

    ____ [2] It is one of several careers which I could find almost equally satisfying.

    ____ [3] It is one of the least satisfying careers I can think of, everything considered.

    ____ [4] I have not considered how satisfying a military career would be.

16. Do you think you will pursue a career in the Army?

    ____ [1] Yes, definitely

    ____ [2] Yes, probably

    ____ [3] I am still undecided

    ____ [4] No, probably not

    ____ [5] No, definitely not

17. Since joining the service, how many times have you received recognition or an award for good conduct or for a job well done?

    ____ [1] Never

    ____ [2] Once

    ____ [3] Twice

    ____ [4] Three times

    ____ [5] Four to five times

    ____ [6] More than five times. (Specify number of times.) (_____times.)

18. Since being assigned to this post, how satisfied have you been with your opportunities for having sexual relations?

    ____ [1] Very dissatisfied

    ____ [2] Somewhat dissatisfied

    ____ [3] Neither satisfied nor dissatisfied

    ____ [4] Fairly satisfied

    ____ [5] Very satisfied

This is the last page of the questionnaire. Please check to be sure you have completed each page and answered each question. When you are satisfied that you have done so, return the questionnaire to the survey monitor. Thanks again for your cooperation.

APPENDIX C

PREDICTION OF MILITARY DELINQUENCY

Although Unit Performance, Appearance, and Conduct were the principal measures of military discipline used in this inquiry, over thirty years of prior research has been devoted to developing predictive models of discipline in which the dependent variable is based solely on official judgements. It is important to demonstrate the relative utility of using official judgements as discipline criteria and replicate this previous research to test the validity of its findings. Also, a few new independent variables were included in the model developed for this inquiry which deserves to be tested as predictors of military delinquency.

METHODS

The Individual Military Delinquency Inventory developed for this inquiry was based on responses to items 12a through 12k of Section VIII (p. 13) of the questionnaire (Appendix B). The items asked the respondents to cite the number of times they had been charged by military authorities as having committed various offenses, including absence without leave (AWOL), insubordination, illicit drug usage, drunken behavior, destruction of property, theft, and assault with or without a weapon.

Other sections of the questionnaire dealt with background and personality measures which might relate to military delinquency. The predictor variables included measures of pre-service social background such as family, job, and school relations, pre-service delinquency, parental socio-economic status, and educational level.

Because of the extreme skewness of the responses to the Individual Delinquency Inventory items, it was not feasible to divide the sample into developmental and replication samples, or to explore in detail any possible differences among unit types, racial groupings, or other possible stratifications of the survey sample. Hence, the analysis of the delinquency data proceeded in three steps:

1. Factor analysis and construction of indices from the Individual Military Delinquency Inventory Items,

2. Factor analysis and/or scaling of predictor scales,

3. Triple-phase regression analysis of the criterion indices (described in detail below).

The results of the factor analyses and scaling procedures are discussed breifly below, followed by the results from the regression analysis. For more information on the predictor scales and indices used in this analysis, see Appendix A.

PREDICTION OF MILITARY DELINQUENCY--THE PREDICTOR VARIABLES

There are many potential predictors of individual delinquency among the items on the survey questionnaire and the scales and indices derived from those items. The set of total predictors can be broken down roughly into two sets: those having to do with each individual's history and personal tendencies -- factors which the Army might be able to use in personnel selection but otherwise has no power to control -- and those having to do with conditions in the respondent's environment following his entry into the Army. It must be noted that the indices in the Military Delinquency Inventory developed for this study are based on items which asked the respondents about the number of times they had committed certain offenses over the course of their entire Army careers and that, therefore, these data do not necessarily reflect the respondent's current tendencies to commit these same offenses. Therefore, the validity of using measures of the respondents' perceptions of their current environment to predict delinquency as measured in this study is questionable; however, some of the measures of the respondents' perceptions of their situation were felt to be diagnostic of conditions obtaining prior to the offenses in question (attitude toward work role, satisfaction with living quarters, recreational opportunities, financial difficulties, and racial discrimination) and were, therefore, included in the analysis. The results obtained using these environmental predictors cannot be construed as being definitive, but they can suggest trends worthy of further investigation.

For the sake of clarifying the path of causation among non-environmental predictors, the non-environmental predictors were divided into background (pre-service offense rates and activities, scales and indices relating to the respondent's family background and his relationship to his parents, school, and pre-service jobs, marital status, and education) and personality (Status Concern, Social Responsibility, Acceptance of Authority, and Recreational Interest) variables. The rational for distinguishing background and personality was that personality might well be a function of the

Table C-1

DESCRIPTIVE MEASURES FOR PREDICTORS AND
CRITERIA OF INDIVIDUAL MILITARY DELINQUENCY

Variable Class	Variable	N[a]	Mean	Standard Deviation	Range
Background	Pre-Service Delinquency (Minor)	1540	3.12	1.99	1 to 5
"	Pre-Service Delinquency (Major)	1531	2.02	1.04	1 to 5
"	Education (item VII-3)	1543	3.15	.810	1 to 6
"	Lived with Parents (VII-8)	-	-	-	-
"	Participation in Group Activities (VII-29v)	1438	2.73	1.18	1 to 4
"	Participation in Team Sports (VII-29w)	1466	3.10	1.12	1 to 4
"	Pre-Service Arrests (VII-35a)	1511	1.91	1.29	1 to 5
"	Pre-Service Convictions (VII-35b)	1505	1.33	.799	1 to 5
"	School Suspensions (VII-35a)	1510	1.89	1.28	1 to 5
"	School Expulsions (VII-35d)	1510	1.49	1.03	1 to 5
"	Parent's SES	1451	0.00	.728	-1.85 to 2.05
"	Broken Home[b]	1389	1.21	.406	1 to 2
"	Family Relations	1549	0.00	.563	-2.20 to 1.09
"	School Relations	1536	2.73	7.15	1 to 4
"	Job Relations	1420	3.28	.630	1 to 4
"	Marital Status[c]	1554	1.41	.491	1 to 2
Personality	Acceptance of Authority	1539	3.67	1.17	1 to 6
"	Status Concern	1537	3.65	1.03	1 to 6
"	Social Responsibility	1552	4.86	1.09	1 to 6
"	Recreational Interest	1555	3.36	.729	1 to 5
Environmental	Quality of Living Quarters (VIII-9)	1534	2.71	1.49	1 to 5
"	Sexual Satisfaction (VIII-18)	1513	2.78	1.59	1 to 5
"	Financial Problems (VII-21)	1446	2.52	1.33	1 to 5
"	Military Work Role	1557	2.93	.975	1 to 4.92
"	General Racial Discrimination	1521	3.28	1.23	1 to 6
"	Unit Racial Discrimination	1535	0.00	.679	-1.01 to 1.95
"	Recreational Availability	1548	3.09	.761	1 to 5
Criterion	AWOL	1428	1.37	.797	1 to 4
"	Resistance to Authority	1367	1.08	.205	1 to 2
"	General Delinquency	1355	1.03	.110	1 to 2

[a] Number of complete cases out of 1564 (stockade prisoners included).

[b] The variable "Broken Home" has the value 1 for subjects whose parents were living together, or one or both of whose parents were deceased, during most of the time the respondent was growing up, and the value 2 if the respondent's parents were not living together or divorced (transformation of item VII-13).

[c] The variable "Marital Status" is a transformation of item VII-16. Marital Status = 1 if the respondent is single, divorced, or widowed, and has the value 2 if the respondent is married or legally separated.

background variables; if so, then personality variables would not contribute to the reliability or validity of a screening process based on the data from the relevant background variables. On the other hand, the personality variables might make a unique contribution to the prediction of tendencies to commit delinquent acts. The analysis procedure was designed to assess the magnitude of the contribution of personality and environment to the prediction of delinquency based on background alone.

Description measures for all the predictor and criterion variables used in this study can be found in Table C-1 above.

DIMENSIONAL STRUCTURE OF THE INDIVIDUAL MILITARY DELINQUENCY INVENTORY

The extreme skewness of the responses to most of the items in the Individual Military Delinquency Inventory presented special analytic problems. The reported frequencies for each offense are summarized in Table C-2. Only for AWOL did as many as twenty percent of the respondents report the offense. Under these circumstances, pooling of the items to increase the reliability of the results is extremely desirable, so a nonmetric factor analysis (SSA-III) was conducted on the Delinquency Inventory items plus the Army Awards Index (number of commendations).

Table C-2

REPORTED FREQUENCIES FOR INDIVIDUAL MILITARY DELINQUENCY OFFENSES

Offense	Percent[a] having committed the offense at least once	Number of cases missing
AWOL	21.3	136
Refusal to follow orders	10.9	183
Insubordination	5.7	205
Drug possession/use	6.7	198
Assault without weapon	4.7	204
Drunk and disorderly	6.2	200
Drunk driving	3.9	207
Destruction of property	3.7	204
Stealing	3.9	208
Assault with a weapon	3.3	218

[a] Percentages are based on the number of non-missing cases out of a total of 1564.

The correlation of the Army Awards Index with the offense frequencies was essentially zero (largest correlation was -.08),[*] so it loaded on a dimension by itself and was thereafter analyzed separately.

The factor analysis indicated that there were two major clusters of offenses: a loose cluster of three items having to do with resistance to authority (refusal to obey orders, insubordination, and possession/use of drugs), and another loose cluster of all the other offenses except AWOL. The number of times the respondent had been charged with being AWOL was analyzed as a separate dimension because of its low communality with the other variables. The factor loadings from a varimax rotation of the two-dimensional solution are given in Table C-3.

Table C-3

FACTOR STRUCTURE OF MILITARY DELINQUENCY

Variable	Loading[a] on Dimension 1	Loading[a] on Dimension 2	Communality
AWOL	.053	.422	.181
Refusal to follow orders	.393	.703	.649
Insubordination	.453	.567	.527
Drug Possession/Use	.276	.543	.371
Assault without weapon	.636	.261	.472
Drunk and disorderly	.610	.216	.419
Drunk driving	.694	.148	.503
Destruction of property	.838	.032	.704
Stealing	.684	.184	.502
Assault with a weapon	.551	.286	.386
No. of commendations	-.007	-.130	.017

[a] From normalized varimax rotation of a two-dimensional solution. The first factor accounted for approximately 29 percent of the total variance, and the second factor accounted for 14 percent.

[*] Kendall's tau beta correlation coefficient.

On the basis of this analysis, three indices of military delinqeuncy were constructed: AWOL — AWOL was analyzed separately from the other offenses; Resistance to Military Authority — the refusal to obey orders, insubordination, and drug items were dichotomized and combined to form this index; General Military Delinquency Index — the items for all offenses not included in the other indices were dichotomized and lumped together in this index. It is likely that this partition of the offenses to form three indices does not do justice to the true complexity of the factor structure underlying military delinquency, but the alternative method of analyzing each offense separately would be costly, and would not be likely to provide reliable results.

No attempt was made to explore the possibility that the factor structure of military delinquency varies from one subject group to another; the skewness of the data precluded any such analysis.

The correlations among the final indices are given in Table C-4.

Table C-4

CORRELATIONS[a] AMONG MILITARY INDIVIDUAL
DELINQUENCY INDICES

AWOL	1.000		
Resistance	.362	1.000	
General	.208	.400	1.000
	AWOL	Resistance	General

[a] Product-moment correlations, 1327 complete cases. All correlations in the table are significant at at least the .01 level.

DIMENSIONAL STRUCTURE OF PRE-SERVICE DELINQUENCY

A correlation matrix for the pre-service delinquency item pool was calculated for the developmental sample and subjected to nonmetric factor analysis. The output of the program indicated that a minimum of four factors would be required to account for the variation among the nineteen items in the pool. Because of the difficulty of interpreting the four-dimensional solution, an attempt was made to reduce the items to a smaller number of interpretable indices. Two items were eliminated for skewness and five other items were eliminated because of vagueness or because they dealt with topics (relations with parents or school authorities) for which other items were available. The remaining twelve items seemed to fall into two categories: minor delinquency (petty theft, illegal consumption of alcohol, etc.), and major delinquency (stealing goods worth more than $50, auto theft, gang fighting, etc.). The correlation matrix for the items in the two indices is displayed in Table C-5.

Some of the dimensional complexity of this item set may be attributable to unreliability due to the skewness of the responses to some of the items, but some of the interdependencies among the items such as the high correlation between "stole goods worth less than $50" and "stole goods worth more than $50" indicate that factor analysis is not appropriate for these items.

When reliabilities were estimated for the entire sample to minimize the effects of skewness, coefficient alpha for the Minor Delinquency Index was .79, and for the Major Delinquency Index it was .74.

DIMENSIONAL STRUCTURE OF FAMILY RELATIONS, SCHOOL RELATIONS, AND JOB RELATIONS

In prior research on Army delinquents and non-delinquents, items included in the school relations and job relations item pools, and some of the items in the family relations pool, were found to load on three distinct factors (Littlepage & Fox, 1972, p. 57). A nonmetric factor analysis (SSA-III) was carried out on these items to investigate the replicability of this finding. The agreement of the SSA-III analysis with the prior findings was excellent; the factor loadings are given in Table C-6, Item VII-29u, however, was dropped because of low communality -- poor average correlation with the other items in its set.

Table C-5

CORRELATIONS[a] FOR PRE-SERVICE DELINQUENCY ITEMS

Minor Delinquency

Item	Stayed out late	Stole <$50	Trespassing	Stole from store	Alcohol
Stole <$50	.29				
Trespassing	.26	.51			
Stole from store	.32	.66	.48		
Alcohol	.42	.31	.31	.34	
Skipped school	.40	.36	.32	.40	.47

Major Delinquency

Item	Injured Somebody	Damaged School	Hit a Teacher	Auto Theft	Gang Fights
Damaged School	.34				
Hit a teacher	.38	.40			
Auto Theft	.21	.31	.30		
Gang Fights	.50	.28	.26	.20	
Stole >$50	.33	.37	.29	.52	.34

Inter-Index Correlations

Item	Injured Somebody	Damaged School	Hit a Teacher	Auto Theft	Gang Fights	Stole >$50
Stayed out late	.20	.13	.04	.09	.21	.19
Stole <$50	.19	.34	.14	.28	.23	.48
Trespassing	.26	.32	.13	.23	.23	.39
Stole from Store	.22	.37	.14	.30	.25	.48
Alcohol	.23	.21	.05	.13	.29	.23
Skipped School	.23	.24	.13	.20	.30	.29

[a] Product-moment correlations calculated for 1473 complete cases. All correlations larger than .051 are significant at the .05 level; all correlations larger than .067 are significant at the .01 level.

	I	II	III
My parents (or legal guardians) were happy together	.668	.041	-.084
Holding a steady job was difficult for me.	.134	-.134	-.568
Jobs I held were boring.	.083	-.061	-.408
I frequently lost jobs because I arrived to work late.	-.070	-.185	-.487
I would usually take a job and quit after a few days or weeks.	.125	-.087	-.648
I had difficulty getting along with people I worked with.	.240	-.094	-.434
I often changed from job to job.	.098	-.105	-.680
I enjoyed working.	.139	.022	-.276
I did not like school.	.115	-.625	-.068
I had difficulty with school work.	.067	-.589	-.183
I enjoyed school.	.162	-.606	.004
My parents (or guardians) were not happy with the grades I received in school.	.028	-.520	-.196
My teachers did not care for me.	.084	-.377	-.306

* From a normalized varimax rotation of the four-dimensional solution.

Table C-6

FACTOR LOADINGS* FOR FAMILY RELATIONS,
SCHOOL RELATIONS, AND JOB RELATIONS ITEMS

Item	Family Relations Factor	School Relations Factor	Job Relations Factor
My family was happy together.	.685	-.044	-.068
My family did things together.	.650	-.153	-.054
My parents were concerned about by welfare.	.390	-.168	-.116
I felt I could talk to my father (or male guardian).	.554	-.120	-.103
I felt I could talk to my mother (or female guardian).	.376	-.050	-.138
My parents (or legal guardians) were happy together	.668	.041	-.084
Holding a steady job was difficult for me.	.134	-.134	-.568
Jobs I held were boring.	.083	-.061	-.408
I frequently lost jobs because I arrived to work late.	-.070	-.185	-.487
I would usually take a job and quit after a few days or weeks.	.125	-.087	-.648
I had difficulty getting along with people I worked with.	.240	-.094	-.434
I often changed from job to job.	.098	-.105	-.680

Items from other sections of the survey questionnaire on relations with parents and parental punitiveness correlated highly with the family relations items from the section subjected to factor analysis, so the whole set of items was pooled into a single Family Relations Scale. The School Relations Scale and the Job Relations Scale were made up from items loading heavily on the corresponding dimensions in the factor analysis.

ACCEPTANCE OF AUTHORITY, STATUS CONCERN, AND SOCIAL RESPONSIBILITY

Upon inspection of the overall interitem correlation matrices for these item sets, it was determined that either 1) the unidimensionality of the item pool was sufficiently evident to make factor analysis unnecessary, and/or 2) the item pool was so small that factor analyzing it in an attempt to create subscales would be fruitless. Items were, however, deleted from some of the itempools for various reasons; see Appendix A for details.

The stability and generality of the correlations among the items within each set was explored by calculating interitem correlation matrices for the subjects in the developmental sample stratified by type of unit, rank, race, educational level, and prisoner status. No significant differences between groups were observed except for the effects of educational level and prisoner status described in the Results chapter of this report.

Following these analyses, the items within pools were averaged to form the Acceptance of Authority. Status Concern, and Social Responsibility Scales. All these scales meet minimum standards for internal consistency reliability (see Appendix A).

PREDICTION OF INDIVIDUAL DELINQUENCY -- METHOD AND RESULTS

Because a large and varied set of variables was available for predicting individual military delinquency, the regression analysis for each of the three criteria was carried out in four stages. First, a regression of the criterion variable on the variables within each of the three predictor categories (background, personality, and environment) separately was conducted to determine which of the variables within each category seemed to have significant impact on the criterion. In the second stage, the best predictor variables from background and personality were combined to test whether the personality measures could predict a significant amount of the variance of the criterion that was not explained by the background variables.

All the variables from the second stage, regardless of whether they contributed significantly to the regression at that stage, were then included in the third stage in which those environmental variables which in the first phase appeared to be associated with the criterion were added to the regression. Finally, a "best" regression model was constructed including all those variables having statistically significant partial correlations with the criterion in the third stage. It should be understood that the "best" prediction models produced by this sequential procedure are not necessarily "best" in the sense of accounting for a maximum amount of variance; rather, they are "best" in the sense of providing reasonably parsimonious sets of predictors which can account for most of the predictable variance of the criteria.

Because of the skewness of the criteria, these analyses were not carried out separately for the developmental and replication samples but only for the sample as a whole (N = 1564).

The overall correlations of the predictor variables with the criterion variables are listed in Table C-7.

AWOL — The results of the sequential regression procedure are listed in Table C-8, and the "best" model in Table C-9. Background personality, and environment all seem to contribute to the likelihood/frequency of AWOL, although background and environment seem to be the most important. No one variable seems to be especially crucial; it seems likely that there are many disparate reasons for soldiers to go AWOL. The prominence of environmental variables, particularly work role (job satisfaction) and financial problems, is particularly interesting since it might be possible for the Army to take actions which might affect these variables. It should be noted, however, that the prominence of the Work Role Scale as a negative predictor of AWOL rate may be an artifact due to the tendency noted in the section "Validation of the Unit Discipline, Leadership, and Esprit d'Corps Scales" for offenders to give poor ratings to their units on all dimensions across the board; however, even if the predictive capacity of the Military Work Role Scale is attributable to that effect, the finding still stands that the tendency to go AWOL is affected by factors unique to the soldier's situation over and above any tendencies he may have brought with him when he joined the Army.

Table C-7

CORRELATIONS OF PREDICTORS WITH MILITARY DELINQUENCY***

Predictor Class	Prediction Variable	Type of Delinquency		
		AWOL	Resistance to Authority	General Delinquency
Background	Pre-Service Delinquency (minor)	.186**	.200**	.137**
"	Pre-Service Delinquency (major)	.266**	.205**	.243**
"	Education	-.114**	-.012	-.058
"	Lived with Parents	.006	.014	-.006
"	Participation in Group Activities	-.044	-.011	.022
"	Participation in Team Sports	-.024	.068*	.017
"	Pre-service Arrests	.257**	.186**	.223**
"	Pre-service Convictions	.180**	.080*	.156**
"	School Suspensions	.225**	.208**	.152**
"	School Expulsions	.226**	.180**	.172**
"	Parent's SES	-.016	.061	.035
"	Broken Home	.119**	.049	.041
"	Family Relations	-.047	-.080*	-.060
"	School Relations	-.084*	-.103**	-.104**
"	Job Relations	-.183**	-.094**	-.111**
"	Marital Status	-.049	-.109**	-.032
Basic Personality	Acceptance of Authority	-.087*	-.172**	-.004
"	Status Concern	.062	-.017	.025
"	Social Responsibility	-.100**	-.166**	-.074*
"	Recreational Interests	-.039	-.006	-.050
Environmental	Quality of Living Quarters	-.073*	-.140**	-.058
"	Sexual Satisfaction	.001	.024	-.033
"	Financial Problems	.168**	.147**	.031
"	Military Work Role	-.191**	-.182**	-.050
"	General Racial Discrimination	.160**	.112**	.028
"	Unit Racial Discrimination	.159**	.121**	.089**
"	Recreational Availability	-.104**	-.109**	-.091**

*	p < .05
**	p < .01
***	Correlations based on cases drawn from both developmental and replication samples having no missing data on any variable in table; N = 878

Table C-8

PREDICTION OF AWOL

Stage 1

Background Variables:

N^a = 977
Overall Test of Regression: $F(16, 960) = 11.94$, $p < .0001$
Multiple Correlation: .407
Percentage of Variance Explained: 16.6
Standard Error or Residuals: .698
Statistically Significant Predictors[b]: Job relations, major
pre-service delinquency, civilian arrests, school expuls
broken home.

Personality Variables:

N^a = 1302
Overall Test of Regression: $F(4, 1297) = 8.70$, $p < .0001$
Multiple Correlation: .162
Percentage of Variance Explained: 2.6
Standard Error of Residuals: .711
Statistically Significant Predictors[b]: Status concern, social
responsibility, acceptance of authority

Environmental Variables:

N^a = 1157
Overall Test of Regression: $F(7, 1149) = 12.38$, $p < .0001$
Multiple Correlation: .265
Percentage of Variance Explained: 7.0
Standard Error of Residuals: .715
Statistically Significant Predictors[b]: Work role, financial
problems, general racial discrimination

Stage 2

Test of the Power of the Personality Variables to Improve o
Regression on Background: $F(3, 1105) = 4.23$, $p < .01$

N^a = 1114
Overall Test of Regression: $F(8, 1105) = 19.58$, $p < .0001$
Multiple Correlation: .352
Percentage of Variance Explained: 12.4
Standard Error of Residuals: .720
Statistically Significant Predictors[b]: Civilian arrests, majc
pre-service delinquency, school expulsions, status conce
relations, broken home, social responsibility.

Table C-8 (cont.)

Stage 3

Test of the Power of the Environmental Variables to Improve on the Regression of Background and Personality: $F(3, 1001) = 12.10$, $p < .0001$

$N^a = 1013$
Overall Test of Regression: $F(11, 1001) = 16.41$, $p < .0001$
Multiple Correlation: .391
Percentage of Variance Explained: 15.3
Standard Error of Residuals: .707
Statistically Significant Predictors[b]: Civilian arrests, work role, financial problems, school expulsions, general racial discrimination, major pre-service delinquency, broken home, status concern.

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[a] The respondents included at each stage of the analysis were those who had non-missing data for all of the variables being used at that stage of the analysis.

[b] Listed in order of power to predict the criterion (magnitude of partial correlation).

Resistance to Authority — As in the case of AWOL, variables related to personality, and environment all seem to have some effect on the tendency for soldiers to resist authority, although no personality variables were included in the final "best" model. Tables C-10 and C-11 summarize the results. Again as in the case of AWOL, no one single variable outstandingly contributes to the final prediction model. In contrast to AWOL however, the best single predictor in the final regression model is a background variable (prior civilian arrests) rather than an environmental variable, although a wider variety of environmental variables (work role, satisfaction with living quarters, financial problems, and sexual satisfaction) contribute at least some predictive capacity to the model. Of course, the likelihood of some bias in the data attributable to spuriously low ratings from offenders exists in this case just as it did for AWOL, but the comment also applies that the data in any case, biased or not, indicate the importance of environmental variables in explaining variance in military delinquency.

Table C-9

"BEST" REGRESSION MODEL FOR PREDICTING AWOL

Predictor Ranking	Variable	Partial Correlation	Unnormalized Regression Coefficient	Significance Level
1	Military Work Role	-.142	-.112 ± .024	.0001
2	School Expulsion	.124	.101 ± .024	.0001
3	Pre-service Arrests	.120	.079 ± .020	.0001
4	Financial Problems	.101	.057 ± .017	.001
5	Broken Home	.090	.164 ± .055	.005
6	Major Pre-service Delinquency	.085	.070 ± .025	.005
7	General Racial Discrimination	.080	.047 ± .018	.01
8	Status Concern	.061	.046 ± .023	.05
	Constant Term		.589 ± .131	.0001

$N = 1114$

Overall Test of Regression: $F(8, 1105) = 27.12$, $p < .0001$

Multiple Correlation = .405

Percentage of Variance Explained: 16.4

Standard Error of Residuals: .705

Table C-10

PREDICTION OF RESISTANCE TO AUTHORITY

Stage 1

Background Variables[a]:

N^b = 1014
Overall Test of Regression: $F(15,998)=6.05$, $p < .0001$
Multiple Correlation: .289
Percentage of Variance Explained: 8.3
Standard Error of Residuals: .169
Statistically Significant Predictors[c]: Civilian arrests,
    participation in team sports, school expulsions.

Personality Variables:

N^b = 1302
OverallTest of Regression: $F(4,1297) = 16.27$, $p < .0001$
Multiple Correlation: .219
Percentage of Variance Explained: 4.8
Standard Error of Residuals: .182
Statistically Significant Predictors[c]: Social responsibility,
    acceptance of authority, status concern.

Environmental Variables:

N^b = 1157
Overall Test of Regression: $F(7,1149) = 11.64$, $p < .0001$
Multiple Correlation: .257
Percentage of Variance Explained: 6.6
Standard Error of Residuals: .183
Statistically Significant Predictors[c]: Work role, satisfaction
    with living quarters, financial problems, general racial
    discrimination, sexual satisfaction.

Stage 2

Test of the Power of the Personality Variables to Improve on the
Regression on Background: $F(3,1241) = 12.32$, $p < .0001$

N^b = 1248
Overall Test of Regression: $F(6,1241) = 22.74$, $p < .0001$
Multiple Correlation: .315
Percentage of Variance Explained: 9.9
Standard Error of Residuals: .190
Statistically Significant Predictors[c]: Civilian arrests, school
    expulsions, social responsibility, acceptance of authority,
    participation in team sports.

Stage 3

Test of the Power of the Environmental Variables to Improve on the Regression on Background and Personality: $F(5, 1098) = 5.99$, $p < .0001$

$N^b = 1110$
Overall Test of Regression: $F(11, 1098) = 14.53$, $p < .0001$
Multiple Correlation: .356
Percentage of Variance Explained: 12.7
Standard Error of Residuals: .190
Statistically Significant Predictors[c]: Civilian arrests, school expulsions, satisfaction with living quarters, participation in team sports, work role, sexual satisfaction, financial problems, social responsibility.

---

[a] Due to an oversight, the broken-home variable was not included in this analysis; however, the very low correlation (.049) between broken home and resistance to authority indicates that no harm was done.

[b] The respondents included at each stage of the analysis were those who had non-missing data for all the variables being used at that stage of the analysis.

[c] Listed in order of power to predict the criterion (magnitude of partial correlation).

Table C-11

"BEST" REGRESSION MODEL FOR PREDICTING
RESISTANCE TO AUTHORITY

Predictor Ranking	Variable	Partial Correlation	Unnormalized Regression Coefficient	Significance Level
1	Civilian Arrests	.160	.0267 ± .0049	.0001
2	Work Role	-.099	-.0225 ± .0067	.001
3	Satisfaction w/ Quarters	-.098	-.0133 ± .0040	.001
4	Social Responsibility	-.089	-.0179 ± .0060	.005
5	School Expulsions	.082	.0179 ± .0064	.01
6	Financial Problems	.077	.0116 ± .0045	.01
7	Team Sports	.075	.0127 ± .0050	.05
8	Sexual Satisfaction	.070	.0087 ± .0037	.05
	Constant Term		1.108 ± .038	.0001

$N = 1142$

Overall Test of Regression: $F(8, 1133) = 19.27$, $p < .0001$

Multiple Correlation: .346

Percentage of Variance Explained: 12.0

Standard Error of Residuals: .189

General Delinquency — The results of the regression analyses of general delinquency are summarized in Tables C-12 and C-13. There is very little to be said about the results since very little was found except that persons who have committed major crimes in the past seem to have a tendency to commit crimes after they join the Army. The personality variables Social Responsibility and Status Concern did predict general delinquency, but apparently only because they are correlated with prior major delinquency and arrests. There is evidence that environmental factors do affect general delinquency, but the effects appear to be so small as to not be worth further investigation using this set of data.

The failure of prediction in this instance — 6.8 percent of the variance explained by the "best" model — may be attributable to the fact that the General Delinquency Index is of questionable validity; better results might be obtainable from an offense-by-offense analysis, but more useful results would probably be obtained from an entirely different research approach.

Table C-12

PREDICTION OF GENERAL DELINQUENCY

Stage 1

Background Variables[a]:

N^b = 1014
Overall Test of Regression: $F(15, 998) = 5.89$, $p < .0001$
Multiple Correlation: .285
Percentage of Variance Explained: 8.1
Standard Error of Residuals: .0898
Statistically Significant Predictors[c]: Major pre-service delinquency, civilian arrests

Personality Variables:

N^b = 1302
Overall Test of Regression: $F(4, 1297) \approx 3.99$, $p < .005$
Multiple Correlation: .110
Percentage of Variance Explaind: 1.2
Standard Error of Residuals: .104
Statistically Significant Predictors[c]: Social responsibility, status concern

Environmental Variables:

N^b = 1157
Overall Test of Regression: $F(7, 1149) = 2.86$, $p < .01$
Multiple Correlation: .131
Percentage of Variance Explained: 1.7
Standard Error of Residuals: .106
Statistically Significant Predictors: No one variable accounted for enough of the variance to achieve significance at the .05 level.

Stage 2

Test of the Power of the Personality Variables to Improve on the Regression on Background:
$F(2, 1300) = 1.24$, $p < .10$

N^b = 1305
Overall Test of Regression: $F(4, 1300) = 23.49$, $p < .0001$
Multiple Correlation: .260
Percentage of Variance Explained: 6.7
Standard Error of Residuals: .101
Statistically Significant Predictors[c]: Major pre-service delinquency, civilian arrests.

Stage 3

Since none of the environmental variables seemed to have a substantial impact on general delinquency, no stage 3 test was carried out.

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a   Due to an oversight, the broken-home variable was not included in this analysis; however, the very low correlation (.041) between broken home and general delinquency indicates that no harm was done.

b   The respondents included at each stage of the analysis were those who had non-missing data for all the variables being used at that stage of the analysis.

c   Listed in order of power to predict the criterion (magnitude of partial correlation).

Table C-13

"BEST" MODEL FOR PREDICTING
GENERAL DELINQUENCY

Predictor Ranking	Variable	Partial Correlation	Unnormalized Regression Coefficient	Significance Level
1	Major Pre-Service Delinquency	.156	.0180 ± .0031	.0001
2	Civilian Arrests	.119	.0110 ± .0025	.0001
	Constant Term		.974 ± .006	.0001

N = 1320
Overall Test of Regression: $F_{(2, 1317)} = 47.76$, $p < .0001$
Multiple Correlation: .260
Percentage of Variance Explained: 6.8
Standard Error of Residuals: .101

APPENDIX D

INVESTIGATION OF OFFICIAL ARMY AWARDS AND COMMENDATIONS
AS CRITERION MEASURE OF DISCIPLINE

APPENDIX D

INVESTIGATION OF OFFICIAL ARMY AWARDS AND COMMENDATIONS
AS CRITERION MEASURE OF DISCIPLINE

It was of interest to Army researchers to pursue the question of
using military awards and commendations as possible criterion measures
of military discipline. To this end, an item was included in the survey
questionnaire to determine the number of awards and commendations the
respondent had received during his Army career (See Item VIII-17 in
survey questionnaire, Appendix B).

It should be noted that official awards and commendations did not
emerge from the Army interview data analysis as useful indicators of
discipline.

The possible utility of the awards/commendation criterion was
tested using a regression model with a series of personality, background,
and no regression model was found which could explain more than 2.9%
of the variance of the number of commendations, and no single predictor
could be found which explained even as much as 1% of the variance. Out
of 28 background, personality, and environmental predictors tested, the
best predictor of number of commendations was the subject's marital
status.

This finding helps confirm the validity of the interview data
gathered for this study, for the interviewees did not perceive military
commendations and awards as reliability indicators of military discipline.
The items were included in the questionnaire in response to the Army's
interest in developing "positive" indicators of discipline. The finding
also further demonstrates the limited utility of official judgments as
discipline criterion and helps justify the approach taken in this inquiry -
that is, to develop discipline criteria based on perceptions of Army
personnel.

APPENDIX E

DESCRIPTION OF SURVEY SAMPLE

APPENDIX E
DESCRIPTION OF SURVEY SAMPLE

Variable	Percent of Total Sample Less Missing Data	N
Rank		
E1	22.4	344
E2	12.0	184
E3	19.6	300
E4	20.1	309
E5	10.6	163
E6	8.2	126
E7	5.1	78
E8 or E9	2.0	30

Missing Data = 30

Race		
Black	25.7	394
White	61.2	940
Other	13.2	202

Missing Data = 23

Type of Unit		
Combat	48.4	732
Support	21.1	319
Training	11.8	179
Stockade/Correctional Training	18.6	281

Missing Data = 53

Post/Facility Site		
Ft. Riley	17.3	271
Retraining Brigade	8.3	130
Ft. Ord	15.5	243
Ft. Bragg	15.3	240
Ft. Wainwright	8.1	126
Frankfurt-Friedburg	5.6	88
Geoppingen	6.5	101
Baumholder	5.8	91
Mannheim	4.5	70
Bad Toelz	3.4	53
Berlin	4.8	75
Furth	4.9	76

Missing Data = 0

APPENDIX E
DESCRIPTION OF SURVEY SAMPLE (Cont.)

Variable	Percent of Total Sample Less Missing Data	N
Regional Origin		
Northeast	22.6	347
South	31.2	478
Midwest	19.8	304
West (Hawaii and Alaska)	18.2	279
None of the above	8.2	126

Missing Data = 30

Community Origin		
Rural	20.6	315
Small City	36.6	560
Suburban -Large City	21.6	331
Large City	21.2	324

Missing Data = 34

Marital Status		
Single	56.1	872
Married	39.9	620
Legally Separated	.8	12
Divorced	3.0	47
Widowed	.2	3

Missing Data = 10

Presence of Wife on or Near Post		
Yes	66.9	433
No	32.6	211

Not Applicable/Missing Data = 917

Living Arrangement		
Barracks	59.6	907
On post family	11.0	167
Off post family	3.3	50
Off post private	19.2	292
Personally owned	4.4	67
Other	2.6	39

Missing Data = 42

APPENDIX E
DESCRIPTION OF SURVEY SAMPLE (Cont.)

Variable	Percent of Total Sample Less Missing Data	N
Time in Service		
Less than 6 months	12.3	188
Between 6 months and 1 year	10.6	162
Between 1 and 2 years	29.4	448
Between 2 and 3 years	18.2	297
Between 3 and 5 years	7.2	110
Between 5 and 10 years	9.3	142
Between 10 and 15 years	5.4	83
More than 15 years	7.5	114

Missing Data = 40

Education		
Completed grade school	1.5	23
Some high school	16.4	253
Completed high school or GED	52.4	808
Some college	26.2	405
Completed college	2.5	38
Some graduate school	1.0	16

Missing Data = 21

Method of Induction		
Volunteer	82.1	1218
Draftee	14.1	209
Army Reserve or National Guard	3.7	56

Missing Data = 81

Join Because of Draft?		
Yes	25.8	358
No	74.2	1028

Missing Data (including draftees) = 178

Career In Army?		
Yes, definitely	18.0	267
Yes, probably	11.8	174
Undecided	21.6	320
Probably not	14.2	210
Definitely not	34.4	

Missing Data = 84

END
DATE
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12-79

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MICROCOPY RESOLUTION TEST CHART

NATIONAL BUREAU OF
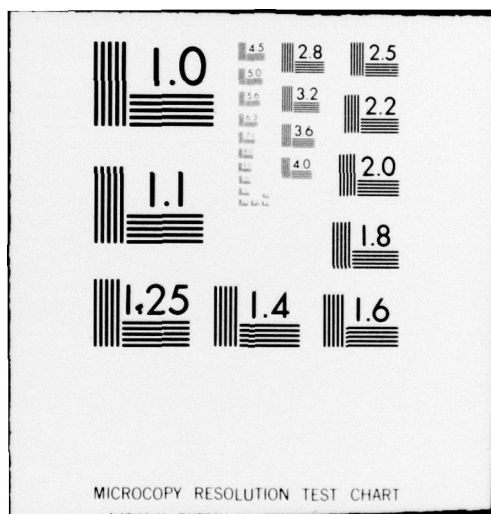
APPENDIX E
DESCRIPTION OF SURVEY SAMPLE (Cont.)

Variable	Percent of Total Sample Less Missing Data	N
Military Prisoner		
Yes	17.7	276
No	82.3	1288

Missing Data = 0

SECURITY CLASSIFICATION OF THIS PAGE *(When Data Entered)*

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE *(and Subtitle)* Research on Socialpsychological Factors Under- lying the Idea of Discipline: Vols. I & II		5. TYPE OF REPORT & PERIOD COVERED Final Report 14 May 1973 - 13 May 1974
		6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Vol I: Ronald G. Bauer & Robert L. Stout Vol II: Linda Harris		8. CONTRACT OR GRANT NUMBER(s) Contract Number DAHC 19-73-C-0036
9. PERFORMING ORGANIZATION NAME AND ADDRESS Bendix Aerospace Systems Division 3300 Plymouth Road Ann Arbor, Michigan 48107		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS U.S. Army Research Institute for the Behavioral and Social Sciences Arlington, Virginia		12. REPORT DATE 13 May 1974
		13. NUMBER OF PAGES Vol I: 184 Vol II: 143
14. MONITORING AGENCY NAME & ADDRESS*(if different from Controlling Office)*		15. SECURITY CLASS. *(of this report)* Unclassified
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT *(of this Report)*		
17. DISTRIBUTION STATEMENT *(of the abstract entered in Block 20, if different from Report)*		
18. SUPPLEMENTARY NOTES		
19. KEY WORDS *(Continue on reverse side if necessary and identify by block number)*		

20. ABSTRACT *(Continue on reverse side if necessary and identify by block number)*

The purpose of the research was to develop and test conceptual and pre-
dictive models of Army unit discipline. In addition, the research was
designed to develop measures of discipline that may be used as diagnostic
tools to help Army leaders empirically assess and manage discipline in
their commands.

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The results indicate that there are three distinguishable components of military unit discipline; unit performance, appearance, and conduct. Demonstrably reliable scales and indices are developed to measure these discipline criteria and their predictor variables. Regression analyses indicate Army unit discipline, and especially performance, are highly predictable using unit members' perceptions of various environmental phenomena, including leadership behavior, esprit d'corps, military work role, racial discrimination, availability of recreational facilities, and quality of living quarters. The results suggest that the measures developed and tested in this inquiry may be used as diagnostic tools to help Army leaders assess and improve discipline in their commands. The implications of these findings for public policy and future research needs are discussed.

Unclassified

RESEARCH ON SOCIALPSYCHOLOGI-
CAL FACTORS UNDERLYING THE
IDEA OF DISCIPLINE: VOLUME I.
CONCEPTUAL AND PREDICTIVE
MODELS OF ARMY UNIT DISCIPLINE
Ronald G. Bauer and Robert L. Stout